



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
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(800) 451-6027  
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TO: Interested Parties / Applicant  
DATE: March 17, 2008  
RE: HARSCO - Reed Minerals Division / 089-25064-00107  
FROM: Matthew Stuckey, Deputy Branch Chief  
Permits Branch  
Office of Air Quality

### **Notice of Decision: Approval - Effective Immediately**

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FNPER.dot12/03/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
*We make Indiana a cleaner, healthier place to live.*

---

Mitchell E. Daniels, Jr.  
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Dave McKee  
HARSCO - Reed Minerals Division  
P.O. Box 9159  
Highland, Indiana 46322

March 17, 2008

Re: F089-25064-00107  
Second Significant Permit Revision to  
FESOP No. 089-16215-00107

Dear Dave McKee:

On July 26, 2007, the Office of Air Quality (OAQ) received an application from the source relating to the construction and operation of a stationary slag processing plant, a modification to the existing facilities, and several administrative changes to allow for a more accurate description of the source and its facilities. The aforementioned revisions will not cause the source's potential to emit to be greater than the threshold levels specified in 326 IAC 2-2 or 326 IAC 2-7, since the entire source (including the new stationary slag processing plant) will continue to be limited to less than the Part 70 and/or PSD major source threshold levels, respectively. These changes to the permit, F089-16215-00107, issued on August 9, 2004, are considered a change by Significant Permit Revision (SPR) pursuant to 326 IAC 2-8-11.1(f)(1)(E) and is hereby approved as described in the attached Technical Support Document (TSD).

The following conditions are applicable to the proposed project:

1. General Construction Conditions  
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached is a copy of the revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Hannah L. Desrosiers, of my staff, at 317-234-5374 or 1-800-451-6027, and ask for extension 4-5374.

Sincerely/Original Signed By:

Matthew Stuckey, Deputy Branch Chief  
Permits Branch  
Office of Air Quality

Attachments  
MS/hld

cc: File – Lake County  
U.S. EPA, Region V  
Lake County Health Department  
Gary Department of Environmental Affairs  
Northwest Regional Office  
Compliance Data Section  
Administrative and Development  
Technical Support and Modeling – Michele Boner  
Air Compliance Section Inspector – Rick Massoels



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**A NEW SOURCE REVIEW AND A  
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT  
(FESOP)  
OFFICE OF AIR QUALITY  
AND  
GARY DEPARTMENT OF ENVIRONMENTAL AFFAIRS**

**HARSCO Corporation - Reed Minerals Division  
7100 West 9<sup>th</sup> Avenue  
Gary, Indiana 46406**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

**The Permittee must comply with all conditions of this permit. Noncompliance with any provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses new source review requirements and is intended to fulfill the new source review procedures and permit revision requirements pursuant to 326 IAC 2-8-11.1, applicable to those conditions.

Operation Permit No.: F089-16215-00107	
Issued by: Original Signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: August 9, 2004 Expiration Date: August 9, 2009
First Administrative Amendment No.: 089-20294-00107, issued on December 23, 2004 Second Administrative Amendment No.: 089-21212-00107, issued on July 1, 2005 First Significant Permit Revision No.: 089-22517-00107, issued on April 20, 2006 Third Administrative Amendment No. 089-24577-00107, issued on July 11, 2007	
Second Significant Permit Revision No.: 089-25064-00107	Pages Modified: Entire Permit
Issued by/Original Signed By:  Matthew Stuckey, Deputy Branch Chief Permits Branch Office of Air Quality	Issuance Date: March 17, 2008  Expiration Date: August 9, 2009

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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and Gary Department of Environmental Affairs (GDEA). The information describing the source contained in conditions A.1, A.3, and A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-8-3(b)]

---

The Permittee owns and operates a stationary slag processing plant and a portable slag processing plant.

Source Address:	7100 West 9 <sup>th</sup> Avenue, Gary Indiana 46406
Mailing Address:	P.O. Box 9159, Highland, IN 46322
General Source Phone:	(219) 944-6250
SIC Code:	3295
County Location:	Lake
Source Location Status:	Nonattainment for 1-hour and 8-hour Ozone, PM2.5, and SO <sub>2</sub>
Source Status:	Attainment for all other criteria pollutants Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD, Emission Offset Rules, and Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Source Definition [326 IAC 2-8-1] [326 IAC 2-7-1(22)]

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This slag processing company consists of three (3) plants at this location:

- (a) Reed Minerals – Plant 14 (Plant ID: #089-00107), a stationary slag processing plant, located at 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406 (SIC: 3295), receiving boiler slag from power plants and producing roofing granules and abrasive grit; and
- (b) Reed Minerals – Plant 24 (Plant ID: #089-05242), a portable slag processing plant, located at 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406 (SIC: 3295), processing blast furnace slag and producing roofing granules.
- (c) Reed Minerals – Plant 34 (Plant ID: #089-00107), a stationary slag processing plant, located at 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406 (SIC: 3295), processing blast furnace and coal slag, and producing roofing granules.

Since the three (3) plants are located on the same property, have the same SIC codes, and are owned by one (1) company, they will be considered one (1) source, effective from the date of issuance of this FESOP.

### A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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This source consists of the following stationary and portable emission units and pollution control devices:

- (a) Plant 14 consisting of one (1) stationary slag processing plant, consisting of the following:
  - (1) One (1) natural gas-fired rotary dryer, identified as P01-14 and constructed in 2006, with a maximum heating capacity of 27 MMBtu/hr and a maximum

throughput rate of 65 tons of coal slag per hour. This facility is equipped with a wet scrubber (identified as CE01-14) for particulate control, which exhausts through stack S01-14.

Under NSPS Subpart UUU, this is considered an affected facility (i.e., any calciner and/or dryer at a mineral processing plant).

- (2) One (1) enclosed dry slag processing area, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, using a baghouse (identified as CE02-14) for particulate control, which exhausts through stack S02-14. This area consists of the following:
  - (i) Three (3) crushers, identified as P03-14.
  - (ii) Thirteen (13) screens, identified as P02-14.
  - (iii) Eight (8) bucket elevators, identified as M01-14.
  - (iv) One (1) conveying system, identified as M02-14, consisting of eleven (11) conveyors.
  - (v) Six (6) blend silos, identified as M03-14.
  - (vi) Three (3) roofing silos, identified as M05-14.
  - (vii) Eight (8) blasting silos, identified as M04-14.
- (3) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 75 tons of coal slag per hour, consisting of the following:
  - (i) One (1) loading hopper.
  - (ii) Three (3) conveyor transfer points.
  - (iii) One (1) initial screening operation.
- (b) Plant 24 consisting of one (1) portable slag processing plant for roofing granule production, constructed in 2004, with a maximum throughput rate of 25 tons of slag per hour, consisting of the following:
  - (1) One (1) feed hopper.
  - (2) Two (2) conveyors to the dryer, identified as M01-24 and M02-24.
  - (3) One (1) natural gas-fired rotary dryer, identified as P01-24, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse CE01-24, and exhausting through stack S01-24.

Under NSPS Subpart UUU, this is considered an affected facility (i.e., any calciner and/or dryer at a mineral processing plant).
  - (4) One (1) conveyor to chute, identified as M03-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
  - (5) One (1) chute to the screen, identified as M04-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.

- (6) One (1) screen, identified as P02-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
  - (7) One (1) conveyor to the bucket elevator, identified as M05-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
  - (8) One (1) QC screen, identified as P03-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
  - (9) One (1) bucket elevator, identified as M06-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
  - (10) One bucket elevator, identified as M07-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
  - (11) Two (2) bucket elevators, identified as M08-24 and M09-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
  - (12) One (1) crusher, identified as P04-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
  - (13) One (1) J&H Hummer screen, identified as P05-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
- (c) Plant 34 consisting of one (1) stationary slag processing plant for roofing granule production, approved for construction in 2007, with a maximum throughput rate of 40 tons of blast furnace and coal slag per hour, consisting of the following:
- (1) One (1) loading hopper and one (1) scalp screen operation, identified as M01-34, uncontrolled and vented to the outside;
  - (2) One (1) conveyor, identified as M02-34, to the dryer, identified as P01-34, uncontrolled and vented to the outside;
  - (3) One (1) natural gas-fired rotary dryer, identified as P01-34, with a maximum heat input capacity of 22 MMBtu/hr controlled by baghouse CE01-34, and exhausting through stack S01-34;  
  
Under NSPS Subpart UUU, this is considered an affected facility (i.e., any calciner and/or dryer at a mineral processing plant).
  - (4) One (1) chute, identified as M03-34, to the bucket elevator, identified as M04-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (5) One (1) bucket elevator, identified as M04-34, to the screen, identified as P02-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (6) One (1) screen, identified as P02-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (7) One (1) conveyor, identified as M06-34, to the bucket elevator, identified as M07-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (8) One (1) bucket elevator, identified as M07-34, to the crusher, identified as P03-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;

- (9) One (1) crusher, identified as P03-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
- (10) One (1) chute, identified as M08-34, to the screen, identified as P02-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
- (11) One (1) conveyor, identified as M05-34, controlled by baghouse CE01-34, and exhausting through stack S01-34, to two (2) bucket elevators, identified as M09-34 and M10-34;

A.4 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (b) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (c) Combustion source flame safety purging on startup.
- (d) A petroleum fuel (other than gasoline), dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (e) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (f) Refractory storage not requiring air pollution control equipment.
- (g) Paved and unpaved roads and parking lots with public access.
- (h) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (i) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (j) Purge double block and bleed valves.
- (k) Other emission units, not regulated by a NESHAP, with PM<sub>10</sub> and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
  - (1) One (1) coal slag pile, with a maximum capacity of 150,000 tons.
  - (2) One (1) unsaleable pile, with a maximum capacity of 10,000 tons.
  - (3) One (1) fines storage pile.

- (4) Five (5) slag storage tanks, constructed in 2004.
- (5) One (1) blast furnace slag pile.
- (6) Two (2) temporary fines piles
- (7) Two (2) wet screws
- (8) Two (2) front end loading activities to move raw materials and fines
- (9) One (1) load out to truck
- (10) Six (6) storage silos
- (11) Two (2) bucket elevators, identified as M09-34 and M10-34, to six (6) storage tanks, controlled by the addition of granule oil and vented to the outside; and
- (12) The fines collected in baghouse CE01-34, and the undersized particles and fines from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture.

A.5 FESOP Applicability [326 IAC 2-8-2]

This source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and GDEA for a Federally Enforceable State Operating Permit (FESOP).

A.6 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

## SECTION B GENERAL CONDITIONS

### B.1 Permit No Defense [IC 13]

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Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

### B.2 Definitions [326 IAC 2-8-1]

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

### B.3 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5]

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- (a) This permit, F089-16215-00107, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

### B.4 Term of Conditions [326 IAC 2-1.1-9.5]

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Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### B.5 Enforceability [326 IAC 2-8-6]

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Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, GDEA, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### B.6 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

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The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

### B.7 Severability [326 IAC 2-8-4(4)]

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The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### B.8 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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This permit does not convey any property rights of any sort, or any exclusive privilege.

**B.9 Duty to Provide Information [326 IAC 2-8-4(5)(E)]**

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- (a) The Permittee shall furnish to IDEM, OAQ and GDEA within a reasonable time, any information that IDEM, OAQ and GDEA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ and GDEA copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ and GDEA the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

**B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]**

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IDEM, OAQ, and GDEA may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

**B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]**

---

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

**B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the

shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and GDEA on or before the date it is due.

- (c) The annual compliance certification report shall include the following:
- (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
  - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ and GDEA may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ and GDEA upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ and GDEA. IDEM, OAQ and GDEA may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

**B.14 Emergency Provisions [326 IAC 2-8-12]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly

signed, contemporaneous operating logs or other relevant evidence that describes the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ Northwest Regional Office and GDEA within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

IDEM, OAQ:

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,

Telephone No.: 317-233-0178 (ask for Compliance Section)

Facsimile No.: 317-233-6865

Northwest Regional Office:

Telephone No.: 1-888-209-8892, or

Telephone No. 219-757-0265

Facsimile No.: 219-757-0267

Gary Department of Environmental Affairs

Telephone Number: 219-882-3000

Facsimile Number: 219-882-3012

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management

Compliance Branch, Office of Air Quality

100 North Senate Avenue

MC 61-53 IGCN 1003

Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs

839 North Broadway

Gary, Indiana 46402

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;

- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
  - (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
  - (f) Failure to notify IDEM, OAQ and GDEA by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
  - (g) Operations may continue during an emergency only if the following conditions are met:
    - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
    - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
      - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
      - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.
- Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

**B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]**

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision); the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination  
[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

---

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ and GDEA determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ and GDEA to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ and GDEA at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ and GDEA may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

**B.17 Permit Renewal [326 IAC 2-8-3(h)]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and GDEA, and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, IN 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
  - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and GDEA on or before the date it is due.
  - (3) If IDEM, OAQ and GDEA upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ and GDEA takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ and GDEA any additional information identified as needed to process the application.

**B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]**

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- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

Any such application shall be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trades that are subject to 326 IAC 2-

8-15(b) through (d) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ and GDEA in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ and GDEA or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

**B.20 Permit Revision Requirement [326 IAC 2-8-11.1]**

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A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

**B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]**

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ and GDEA, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ and GDEA within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ and GDEA the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit revision under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.3 and A.4.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction work is suspended for a continuous period of one (1) year or more.

B.25 Credible Evidence [326 IAC 2-8-4(3)] [326 IAC 2-8-5] [62 FR 8314] [326 IAC 1-16]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source

### Emissions Limitations and Standards [326 IAC 2-8-4(1)]

#### C.1 Overall Source Limit [326 IAC 2-8] [326 IAC 2-2][326 IAC 2-3]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
- (1) The potential to emit volatile organic compounds (VOCs) from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period. This limitation will also make the requirements of 326 IAC 2-3 (Emission Offset) not applicable;
  - (2) The potential to emit any regulated pollutant from the entire source, except particulate matter (PM) and volatile organic compounds (VOCs), shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period;
  - (3) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
  - (4) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. This limitation will also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Fugitive Dust Emissions [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Emission Limitations), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
- (i) The PM<sub>10</sub> emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (k) Any facility or operation not specified in 326 IAC 6-1-11.1(d) shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, submitted on January 24, 2003. This plan is attached as Attachment A.

**C.7 Stack Height [326 IAC 1-7]**

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The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

**C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-52 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

### **Testing Requirements [326 IAC 2-8-4(3)]**

#### **C.9 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ and GDEA.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ and GDEA of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and GDEA not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ and GDEA if the Permittee submits to IDEM, OAQ and GDEA a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

## **Compliance Requirements [326 IAC 2-1.1-11]**

### **C.10 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

## **Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

### **C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]**

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

in writing, prior to the end of the initial ninety (90) day compliance schedule with full justification of the reasons for inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

### **C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

### **C.13 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]**

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ and GDEA approve the use of an instrument that does not meet the above specifications provided the Permittee can

demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

**Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

**C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

within ninety (90) days from the date of issuance of this permit.

The ERP does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) If the ERP is disapproved by IDEM, OAQ and GDEA the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAQ and GDEA that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

**C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]**

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If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

**C.16 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]**

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(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records;
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ and GDEA within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ and GDEA that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ and GDEA may extend the retesting deadline.
- (c) IDEM, OAQ and GDEA reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

### C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

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- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

### C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

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- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and GDEA on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report covered the period commencing on the date of issuance of the original FESOP and ended on the last day of the reporting period. All subsequent reporting periods shall be based on calendar years.

## **Stratospheric Ozone Protection**

### **C.20 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 FACILITY CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]: Plant 14

- (a) Plant 14 consisting of one (1) stationary slag processing plant, consisting of the following:
- (1) One (1) natural gas-fired rotary dryer, identified as P01-14 and constructed in 2006, with a maximum heating capacity of 27 MMBtu/hr and a maximum throughput rate of 65 tons of coal slag per hour. This facility is equipped with a wet scrubber (identified as CE01-14) for particulate control, which exhausts through stack S01-14.  
  
Under NSPS Subpart UUU, this is considered an affected facility (i.e., any calciner and/or dryer at a mineral processing plant).
  - (2) One (1) enclosed dry slag processing area, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, using a baghouse (identified as CE02-14) for particulate control, which exhausts through stack S02-14. This area consists of the following:
    - (i) Three (3) crushers, identified as P03-14.
    - (ii) Thirteen (13) screens, identified as P02-14.
    - (iii) Eight (8) bucket elevators, identified as M01-14.
    - (iv) One (1) conveying system, identified as M02-14, consisting of eleven (11) conveyors.
    - (v) Six (6) blend silos, identified as M03-14.
    - (vi) Three (3) roofing silos, identified as M05-14.
    - (vii) Eight (8) blasting silos, identified as M04-14.
  - (3) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 75 tons of coal slag per hour, consisting of the following:
    - (i) One (1) loading hopper.
    - (ii) Three (3) conveyor transfer points.
    - (iii) One (1) initial screening operation.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to dryer P01-14 except when otherwise specified in 40 CFR 60, Subpart UUU (NSPS for Calciners and Dryers in Mineral Industries).

D.1.2 Particulate Matter Emission Limitation [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 12 and 40 CFR 60.732(a), the PM emissions from dryer P01-14 shall not exceed 0.025 grain per dry standard cubic foot (gr/dscf).

D.1.3 PM and PM10 Limitations [326 IAC 2-8] [326 IAC 2-2]

Pursuant to 326 IAC 2-8 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following requirements:

- (a) The PM/PM10 emissions from dryer P01-14 shall not exceed 3.50 lbs/hr. This is equivalent to 15.3 tons of PM/PM10 emissions per year.
- (b) The PM/PM10 emissions from the dry slag processing area shall not exceed 3.50 lbs/hr. This limit is equivalent to 15.3 tons of PM/PM10 emissions per year.
- (c) The PM/PM10 emissions from each of the units at the raw slag handling operation shall not exceed the limit listed in the table below:

Unit	PM/PM10 Emission Limit (lbs/hr)
Loading Hopper	1.00
Each of the Three (3) Conveyor Transfer Points	0.50
Screening Operation	2.00

This is equivalent to 15.3 tons/yr of PM/PM10 emissions.

Combined with the PM/PM10 emissions from Plant 24, Plant 34 and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10. Therefore, this source is a minor source under 326 IAC 2-2 (PSD) and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

D.1.4 PM10 Limitations [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-29 (formerly 326 IAC 6-1-10.1(d)(31)), the PM10 emissions from the crushing and screening operations in Plant 14 shall not exceed 0.015 grain per dry standard cubic foot and 9.0 lbs/hr.

D.1.5 PM Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2(a)), particulate matter (PM) emissions from the raw slag handling operation and rotary dryer P01-14 shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.1.6 Lake County Particulate Matter Contingency Measures [326 IAC 6.8-11]

Pursuant to 326 IAC 6.8-11 (formerly 326 IAC 6-1-11.2), upon notification from IDEM, OAQ and GDEA that the source has caused or contributed to an exceedance of the twenty-four (24) hour ambient air quality standard for PM10, the Permittee shall implement any reduction measures required by 326 IAC 6.8-11 within one hundred eighty (180) days of the initial notification.

D.1.7 Monitoring Requirements [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 12 and 40 CFR 60.734(d), the Permittee shall install, calibrate, maintain, and operate monitoring devices that continuously measure and record the following parameters for scrubber CE01-14 (which is used to control the particulate emissions from dryer P01-14):

- (a) Pressure drop; and
- (b) Scrubbing liquid flow rate.

**D.1.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

**Compliance Determination Requirements**

**D.1.9 PM and PM10 Control [326 IAC 2-8-5(a)(4)]**

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- (a) In order to comply with Conditions D.1.2, D.1.3, and D.1.4, scrubber CE01-14 controlling the PM and PM10 emissions from the dryer P01-14, and baghouse CE02-14 controlling the PM and PM10 emissions from the dry slag processing area shall be in operation and control PM/PM10 emissions at all times that these units are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

**D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11]**

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- (a) In order to document compliance with Conditions D.1.2, D.1.3, and D.1.4, within sixty (60) days after achieving the maximum production rate and no later than 180 days after the initial start-up, the Permittee shall conduct PM and PM10 performance tests for the dryer P01-14 utilizing methods as approved by the Commissioner.
- (b) In order to document compliance with Conditions D.1.3 and D.1.4, within ninety (90) days after issuance of this permit, but no later than 180 day after issuance of permit No.: 089-16215-00107, issued August 9, 2004, the Permittee shall conduct PM and PM10 performance tests for the dry slag processing area utilizing methods as approved by the Commissioner.

These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 includes filterable PM10 and condensable PM10.

**Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

**D.1.11 Visible Emissions Notations**

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- (a) Visible emission notations of the stack exhausts from the scrubber, baghouse and each of the raw slag handling operations (including the hopper, the conveyor transfer points, and the initial screening facility) shall be performed daily during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

**D.1.12 Parametric Monitoring [40 CFR 60, Subpart UUU]**

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- (a) The Permittee shall monitor and record the pressure drop and the flow rate for scrubber CE01-14 at the frequency specified in the table below, when the dryer P01-14 is in operation. Unless operated under conditions for which the Response to Excursions or Exceedances specifies otherwise, the pressure drop across the scrubber and the flow rate shall be maintained with the ranges listed in the table below or determined during the latest compliant stack test:

Scrubber ID	Monitoring Frequency	Pressure Drop Range (inches of water)	Minimum Flow Rate (gallons per minute)
CE01-14	Continuous	6.0 – 10.0	225

When for any one reading, the pressure reading is outside the above mentioned range or the flow rate is below the above mentioned minimum, the Permittee shall take reasonable response steps in accordance with Section C-Response to Excursions or Exceedances.

- (b) The Permittee shall record the pressure drop across baghouse CE02-14, used in conjunction with the dry slag processing area, at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.0 - 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and GDEA and shall be calibrated at least once every twelve (12) months.

**D.1.13 Scrubber Failure Detection**

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In the event that a scrubber malfunction has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

**D.1.14 Broken or Failed Bag Detection**

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- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event

qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

#### **D.1.15 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.11, the Permittee shall maintain a daily record of visible emission notations of each of the stack exhausts from the scrubber, baghouse and each of the raw slag handling operations. The Permittee shall include in each daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) To document compliance with Conditions D.1.7, and D.1.12(a), the Permittee shall maintain the following parameters for each scrubber during normal operation:
  - (1) The pressure drop; and
  - (2) Flow rate.
- (c) To document compliance with Condition D.1.12(b), the Permittee shall maintain a daily record of the pressure drop during normal operation for the baghouse. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.2 FACILITY CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]: Plant 24

(b) Plant 24 consisting of one (1) portable slag processing plant for roofing granule production, constructed in 2004, with a maximum throughput rate of 25 tons of slag per hour, consisting of the following:

- (1) One (1) feed hopper.
- (2) Two (2) conveyors to the dryer, identified as M01-24 and M02-24.
- (3) One (1) natural gas-fired rotary dryer, identified as P01-24, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse CE01-24, and exhausting through stack S01-24.

Under NSPS Subpart UUU, this is considered an affected facility (i.e., any calciner and/or dryer at a mineral processing plant).

- (4) One (1) conveyor to chute, identified as M03-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
- (5) One (1) chute to the screen, identified as M04-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
- (6) One (1) screen, identified as P02-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
- (7) One (1) conveyor to the bucket elevator, identified as M05-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
- (8) One (1) QC screen, identified as P03-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
- (9) One (1) bucket elevator, identified as M06-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
- (10) One bucket elevator, identified as M07-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
- (11) Two (2) bucket elevators, identified as M08-24 and M09-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
- (12) One (1) crusher, identified as P04-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.
- (13) One (1) J&H Hummer screen, identified as P05-24, controlled by baghouse CE01-24, and exhausting through stack S01-24.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.2.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to dryer P01-24 except when otherwise specified in 40 CFR 60, Subpart UUU (NSPS for Calciners and Dryers in Mineral Industries).

**D.2.2 Particulate Matter Emission Limitation [326 IAC 12] [40 CFR 60, Subpart UUU]**

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Pursuant to 326 IAC 12 and 40 CFR 60.732, the PM emissions from dryer P01-24 shall not exceed the following:

- (a) 0.025 grain per dry standard cubic foot (gr/dscf); and
- (b) 10% opacity.

**D.2.3 PM and PM10 Limitations [326 IAC 2-8] [326 IAC 2-2]**

---

Pursuant to 326 IAC 2-8 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following requirements:

- (a) The PM/PM10 emissions from the Baghouse CE01-24, which is used to control the portable dryer P01-24 and the conveyors, crusher, bucket elevators, and the screening operations, shall not exceed 3.08 lbs/hr. This limit is equivalent to 13.5 tons/yr of PM/PM10 emissions.
- (b) The PM/PM10 emissions from the feed hopper and each of the uncontrolled conveyor transfer points of the portable slag process plant shall not exceed the limit listed in the table below:

Unit	PM/PM10 Emission Limit (lbs/hr)
Feed Hopper	0.22
Each of the Two (2) Uncontrolled Conveyor Transfer Points	0.10

This is equivalent to 1.84 tons/yr of PM/PM10 emissions.

Combined with the PM/PM10 emissions from Plant 14, Plant 34, the portable generator, and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10. Therefore, this source is a minor source under 326 IAC 2-2 (PSD) and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

**D.2.4 PM Limitations [326 IAC 6.8-1-2]**

---

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2(a)), particulate matter (PM) emissions from each unit of the portable plant shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

**D.2.5 Lake County Particulate Matter Contingency Measures [326 IAC 6.8-11]**

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Pursuant to 326 IAC 6.8-11 (formerly 326 IAC 6-1-11.2), upon notification from IDEM, OAQ and GDEA that the source has caused or contributed to an exceedance of the twenty-four (24) hour ambient air quality standard for PM10, the Permittee shall implement any reduction measures required by 326 IAC 6.8-11 within one hundred eighty (180) days of the initial notification.

**D.2.6 Monitoring Requirements [326 IAC 12] [40 CFR 60, Subpart UUU]**

---

Pursuant to 326 IAC 12 and 40 CFR 60.734(b), the Permittee shall have a certified visible emissions observer to measure and record three 6-minute averages of the opacity of visible emissions from the baghouse CE01-24 (used for dryer P01-24) to the atmosphere each day of operation in accordance with Method 9 of Appendix A of Part 60.

**D.2.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

## Compliance Determination Requirements

### D.2.8 PM and PM10 Control [326 IAC 2-8-5(a)(4)]

---

- (a) In order to comply with Conditions D.2.1, D.2.2, and D.2.3, baghouse CE01-24 shall be in operation and control emissions at all times that the portable dryer or the portable slag handling processes are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

### D.2.9 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11] [40 CFR 60, Subpart UUU]

---

In order to document compliance with Conditions D.2.1, D.2.2(a), and D.2.3, within 60 days after achieving the maximum production, but not later than 180 days after initial rerouting of emissions from conveyors and screening operations to baghouse CE01-24, the Permittee shall conduct PM performance test utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.

## Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

### D.2.10 Visible Emissions Notations

---

- (a) Visible emission notations of the exhaust from baghouse CE01-24 shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

### D.2.11 Parametric Monitoring

---

The Permittee shall record the pressure drop across baghouse CE01-24 used in conjunction with the portable dryer and the portable slag handling operations, at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range as listed in the table below or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

Baghouse ID	Pressure Drop Range (inches of water)
CE01-24	3.0 – 5.5

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and GDEA, and shall be calibrated at least once every twelve (12) months.

#### D.2.12 Broken or Failed Bag Detection

---

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

#### Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

##### D.2.13 Record Keeping Requirements

---

- (a) To document compliance with Conditions D.2.6 and D.2.10, the Permittee shall maintain a daily record of visible emissions from the stack exhaust from baghouse CE01-24. The Permittee shall include in each daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) To document compliance with Condition D.2.11, the Permittee shall maintain a daily record of the pressure drop during normal operation for the baghouse. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**SECTION D.3****FACILITY CONDITIONS****Facility Description [326 IAC 2-8-4(10)]: Plant 34**

- (c) Plant 34 consisting of one (1) stationary slag processing plant for roofing granule production, approved for construction in 2007, with a maximum throughput rate of 40 tons of blast furnace and coal slag per hour, consisting of the following:
- (1) One (1) loading hopper and one (1) scalp screen operation, identified as M01-34, uncontrolled and vented to the outside;
  - (2) One (1) conveyor, identified as M02-34, to the dryer, identified as P01-34 , uncontrolled and vented to the outside;
  - (3) One (1) natural gas-fired rotary dryer, identified as P01-34, with a maximum heat input capacity of 22 MMBtu/hr controlled by baghouse CE01-34, and exhausting through stack S01-34;  
  
Under NSPS Subpart UUU, this is considered an affected facility (i.e., any calciner and/or dryer at a mineral processing plant).
  - (4) One (1) chute, identified as M03-34, to the bucket elevator, identified as M04-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;
  - (5) One (1) bucket elevator, identified as M04-34, to the screen, identified as P02-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;
  - (6) One (1) screen, identified as P02-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;
  - (7) One (1) conveyor, identified as M06-34, to the bucket elevator, identified as M07-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;
  - (8) One (1) bucket elevator, identified as M07-34, to the crusher, identified as P03-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;
  - (9) One (1) crusher, identified as P03-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;
  - (10) One (1) chute, identified as M08-34, to the screen, identified as P02-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;
  - (11) One (1) conveyor, identified as M05-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34, from the screen, identified as P02-34, to two (2) bucket elevators, identified as M09-34 and M10-34; and
  - (12) Two (2) bucket elevators, identified as M09-34 and M10-34, to the six (6) storage tanks, controlled by the addition of granule oil and vented to the outside.
  - (13) The fines collected in baghouse CE01-34, and the undersized particles and fines from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

## Emission Limitations and Standards [326 IAC 2-8-4(1)]

### D.3.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

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The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to dryer P01-34 except when otherwise specified in 40 CFR 60, Subpart UUU (NSPS for Calciners and Dryers in Mineral Industries).

### D.3.2 Particulate Matter Emission Limitation [326 IAC 12] [40 CFR 60, Subpart UUU]

---

Pursuant to 326 IAC 12 and 40 CFR 60.732, the PM emissions from dryer P01-34 shall not exceed the following:

- (a) 0.025 grain per dry standard cubic foot (gr/dscf); and
- (b) 10% opacity.

### D.3.3 PM and PM10 Limitations [326 IAC 2-8] [326 IAC 2-2]

---

Pursuant to 326 IAC 2-8 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following requirements:

- (a) The PM/PM10 emissions from the Baghouse CE01-34, which is used to control the dryer P01-34 and the conveyors, crusher, bucket elevators, and the screening operations, shall not exceed 5.50 lbs/hr. This limit is equivalent to 24.1 tons/yr of PM/PM10 emissions.
- (b) The PM/PM10 emissions from the feed hopper and each of the uncontrolled conveyor transfer points of slag processing Plant 34 shall not exceed the limit listed in the table below:

Unit	PM/PM10 Emission Limit (lbs/hr)
Feed Hopper and Scalp Screen (M01-34)	0.35
Uncontrolled Conveyor Transfer Point, each (M02-34)	0.10

This is equivalent to 2.0 tons/yr of PM/PM10 emissions.

Combined with the PM/PM10 emissions from Plant 14, Plant 24, the portable generator, and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10. Therefore, this source is a minor source under 326 IAC 2-2 (PSD) and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

### D.3.4 PM Limitations [326 IAC 6.8-1-2]

---

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2(a)), particulate matter (PM) emissions from the baghouse CE01-34 shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

### D.3.5 Lake County Particulate Matter Contingency Measures [326 IAC 6.8-11]

---

Pursuant to 326 IAC 6.8-11 (formerly 326 IAC 6-1-11.2), upon notification from IDEM, OAQ and GDEA that the source has caused or contributed to an exceedance of the twenty-four (24) hour ambient air quality standard for PM10, the Permittee shall implement any reduction measures required by 326 IAC 6.8-11 within one hundred eighty (180) days of the initial notification.

### D.3.6 Monitoring Requirements [326 IAC 12] [40 CFR 60, Subpart UUU]

---

Pursuant to 326 IAC 12 and 40 CFR 60.734(b), the Permittee shall have a certified visible emissions observer to measure and record three 6-minute averages of the opacity of visible

emissions from the baghouse CE01-34 (used for dryer P01-34) to the atmosphere each day of operation of the dryer in accordance with Method 9 of Appendix A of Part 60.

**D.3.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

**Compliance Determination Requirements**

**D.3.8 PM and PM10 Control [326 IAC 2-8-5(a)(4)]**

---

- (a) In order to comply with Conditions D.3.1, D.3.2, and D.3.3, baghouse CE01-34 shall be in operation and control emissions at all times that the facilities that exhaust through baghouse CE01-34 are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

**D.3.9 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11]**

---

In order to document compliance with Conditions D.3.2, and D.3.3, within sixty (60) days after achieving the maximum production rate and no later than 180 days after the initial start-up, the Permittee shall conduct PM and PM10 performance tests for the dryer P01-34 utilizing methods as approved by the Commissioner.

These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 includes filterable PM10 and condensable PM10.

**Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

**D.3.10 Visible Emissions Notations**

---

- (a) Visible emission notations of the stack exhausts from the baghouse CE01-34 and each of the bucket elevators, conveyor transfer points, crusher, chutes, and screen shall be performed daily during normal daylight operations when the dryer P01-34 is not in operation. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

### D.3.11 Parametric Monitoring

---

The Permittee shall record the pressure drop across baghouse CE01-34 used in conjunction with dryer P01-34 and the bucket elevators, conveyor transfer points, crusher, chutes, and screen, at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range as listed in the table below or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

Baghouse ID	Pressure Drop Range (inches of water)
CE01-34	2.0 - 8.0

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and GDEA, and shall be calibrated at least once every six (6) months.

### D.3.12 Broken or Failed Bag Detection

---

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces, or triboflows.

## Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

### D.3.13 Record Keeping Requirements

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- (a) To document compliance with Conditions D.3.6 and D.3.10, the Permittee shall maintain a daily record of visible emissions from the stack exhaust for baghouse CE01-34 and the bucket elevators, conveyor transfer points, crusher, chutes, and screen. The Permittee shall include in each daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).
- (b) To document compliance with Condition D.3.11, the Permittee shall maintain a daily record of the pressure drop during normal operation for baghouse CE01-34. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.4 FACILITY CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (b) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (c) Combustion source flame safety purging on startup.
- (d) A petroleum fuel (other than gasoline), dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (e) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (f) Refractory storage not requiring air pollution control equipment.
- (g) Paved and unpaved roads and parking lots with public access.
- (h) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (i) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (j) Purge double block and bleed valves.
- (k) Other emission units, not regulated by a NESHAP, with PM<sub>10</sub> and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
  - (1) One (1) coal slag pile, with a maximum capacity of 150,000 tons.
  - (2) One (1) unsaleable pile, with a maximum capacity of 10,000 tons.
  - (3) One (1) fines storage pile.
  - (4) Five (5) slag storage tanks, constructed in 2004.
  - (5) One (1) blast furnace slag pile.
  - (6) Two (2) temporary fines piles
  - (7) Two (2) wet screws
  - (8) Two (2) front end loading activities to move raw materials and fines
  - (9) One (1) load out to truck
  - (10) Six (6) storage silos
  - (11) Two (2) bucket elevators, identified as M09-34 and M10-34, to six (6) storage tanks, controlled by the addition of granule oil and vented to the outside; and

- (12) The fines collected in baghouse CE01-34, and the undersized particles and fines from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-8-4(1)]**

There are no specifically applicable state or federal requirements for these units.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: HARSCO Corporation - Reed Minerals Division  
Source Address: 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406  
Mailing Address: P.O. Box 8888, Camp Hill, PA 17001-8888  
FESOP No.: 089-16215-00107

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) \_\_\_\_\_
- Report (specify) \_\_\_\_\_
- Notification (specify) \_\_\_\_\_
- Affidavit (specify) \_\_\_\_\_
- Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865  
and  
Gary Department of Environmental Affairs  
839 North Broadway  
Gary, Indiana 46402  
Phone: 219-882-3000  
Fax: 219-882-3012**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT**

Source Name: HARSCO Corporation - Reed Minerals Division  
Source Address: 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406  
Mailing Address: P.O. Box 8888, Camp Hill, PA 17001-8888  
FESOP No.: 089-16215-00107

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION  
 and  
 Gary Department of Environmental Affairs  
 839 North Broadway  
 Gary, Indiana 46402  
 Phone: 219-882-3000  
 Fax: 219-882-3012**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: HARSCO Corporation - Reed Minerals Division  
 Source Address: 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406  
 Mailing Address: P.O. Box 8888, Camp Hill, PA 17001-8888  
 FESOP No.: 089-16215-00107

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**ATTACHMENT A: FUGITIVE DUST CONTROL PLAN**  
**HARSCO – Reed Minerals Division**  
**7100 West 9th Avenue, Gary, Indiana**  
**FESOP No.: 089-16215-00107**

*Background*

Fugitive dust sources of significance from this site can be categorized into three groups: roadways, fines, stockpiles, and inactive ground level areas not dedicated to any particular use.

Total site size is 36.4 acres unpaved with 10,560 yd<sup>2</sup> of unpaved roadway (.6mi. x 10 yds). This plan expects to control fugitive emissions at 92.0% reduction.

*Plan of Control*

A. Person responsible for plan implementation:

Plant Superintendent  
7100 West 9th Avenue  
Gary, Indiana  
(219) 923-4200

B. Roadway Control Measures

1. All active entrance roadways will be clearly marked and traffic will be restricted to controlled areas.
2. All vehicles shall not exceed 5 mph.
3. All active roadways will be inspected daily to assure nominal thickness (2") of coarse aggregate oversize is maintained on all traffic areas. Required material will be placed by an on site front loader and/or dump truck.
4. Monthly representative roadway aggregate samples will be taken and analyzed to assure silt content (200 mesh) is less than 3%.

C. Fines stockpile control measures

Note: Raw material stockpiles are exempt from this plan, because silt content is .2% and moisture content is typical 5%.

1. Storage pile height shall be limited to 50 feet.
2. End loader bucket drop height will be minimized to the lowest practical elevation.
3. Water will be applied to fines stockpiles to control fugitive dust when necessary.
4. Water will not be applied to fines stockpiles when the following conditions prevail.
  - a. During freezing weather, typically between October 15 and April 15.
5. RMD completed a "green belt" alternatives study for fugitive dust control as follows:
  - a. Summer 1986 (June 1 – August 31) Select landscape consultant.

- b. Fall 1986 (September 1 – October 31) Implement vegetative growth test areas.
- c. Winter 1986 (November 1 – February 28) Inspect test areas, Document growth progress, Reseed winter damaged areas.
- d. Spring 1987 (March 1 – May 30) Continue documentation of growth areas. Monitor and document progress.
- e. Summer 1987 (June 1 – August 31) Review test program. Determine the most viable method of establishing a green belt on site. Prepare for Phase I implementation.
- f. Fall 1987 (September 1 – October 31) Review test areas and evaluate results. Implement Phase I green belt control plan.
- g. Spring 1988 (March 1 – April 30) Review and evaluate implementation of green belt project. Prepare to implement Phase II construction of green belt. Repair any winter damage.
- h. Fall 1988 (May 1 – October 31) Implement Phase II green belt construction.
- i. Spring 1989 (March 1 – May 31) Review control plan and determine whether additional controls are required.

D. Open areas (Inactive)

- 1. All such classified areas will be closed to truck traffic, except by special permit.
- 2. Natural vegetative encroachment will be allowed and promoted. Green belt establishment such as this forbids the use of surface control chemicals which contaminate the existing surface and/or prevent vegetative root penetration.
- 3. All open areas with the greatest potential for reactivation as storage for fines will be covered with oversize aggregate, as set forth in the roadway control measures.

E. Records shall be kept and maintained which document all control measures and activities to be implemented in accordance with the approved control plan. Said records shall be available upon the request of the Indiana Department of Environmental Management or the Gary Department of Environmental Affairs, and shall be retained for three (3) years.

F. Plan Implementation

The effective date of this plan was August 1, 1986.

Date of update: March 04, 2008.

**Indiana Department of Environmental Management  
Office of Air Quality  
And  
Gary Department of Environmental Affairs**

Addendum to the  
Technical Support Document (TSD)  
for a New Source Review and  
Federally Enforceable State Operating Permit

**Source Background and Description**

Source Name:	Harsco Corporation - Reed Minerals Division
Source Location:	7100 West 9 <sup>th</sup> Avenue, Gary, Indiana 46406
County:	Lake
SIC Code:	3295
Operation Permit No.:	F089-16215-00107
Issuance Date:	August 9, 2009
Second SPR No.:	F089-22517-00107
Permit Reviewer:	Hannah L. Desrosiers

On November 26, 2007 the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) had a notice published in The Post Tribune, Merrillville, Indiana, stating that HARSCO Corporation - Reed Minerals Division had applied for a Significant Permit Revision (SPR) to a Federally Enforceable State Operating (FESOP) Permit relating to the construction and operation of a stationary slag processing plant (Plant 34), a modification to the existing facilities and several administrative changes to allow for a more accurate description of the source and its facilities. The notice also stated that IDEM, OAQ proposed to issue a FESOP SPR for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**. The Table of Contents has been updated as necessary.

On December 19, 2007, HARSCO Corporation - Reed Minerals Division submitted comments on the proposed Significant Permit Revision. The summary of the comments and responses are shown below.

**Comment 1:**

Throughout permit - the proper name for this facility is "Harsco Corporation - Reed Minerals Division". Harsco respectfully requests that this be corrected throughout the permit.

**Response to Comment 1:**

IDEM agrees and has revised the entire permit to reflect the requested change.

**Comment 2:**

A.3: Emission Units and Pollution Control Equipment Summary - the bucket elevators (M09-34 and M10-35) and the transfer of wet fines identified in subconditions (c)(12) and (c)(13) should be

deleted, because these units handle only oiled roofing granules and, therefore, emissions are not anticipated - this is consistent with a previous determination by IDEM for this same facility. Specifically, in the cover letter to the Third Administrative Amendment to FESOP 089-16215-00107 (#1089-24577-000107), IDEM stated that "[n]o emissions are anticipated from these [elevators] and therefore no changes are required to the permit, because these units will only handle oiled roofing granules."

## Response to Comment 2:

IDEM agrees. However, IDEM believes that it is necessary that the emission units be listed in the permit. While oiling the roofing granules significantly reduces particulate emissions, no control method imparts 100% control efficiency. Therefore, since these units have the potential to emit some minor amount of particulate emissions, they will be moved to Section A.4: Insignificant Activities, indicating that they do not contribute any significant emissions to the entire source, as follows:

### A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

---

This source consists of the following stationary and portable emission units and pollution control devices:

...

- (c) Plant 34 consisting of one (1) stationary slag processing plant for roofing granule production, approved for construction in 2007, with a maximum throughput rate of 40 tons of blast furnace and coal slag per hour, consisting of the following:

...

~~(12) Two (2) bucket elevators, identified as M09-34 and M10-34, to the six (6) storage tanks, controlled by the addition of granule oil and vented to the outside; and~~

~~(13) The fines collected in baghouse CE01-34, and the undersized particles and fines from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture.~~

...

### A.4 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

---

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

...

- (k) Other emission units, not regulated by a NESHAP, with PM10 and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

...

**(11) Two (2) bucket elevators, identified as M09-34 and M10-34, to six (6) storage tanks, controlled by the addition of granule oil and vented to the outside; and**

**(12) The fines collected in baghouse CE01-34, and the undersized particles and fines from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture.**

...

**Comment 3:**

B.15: Deviations from Permit Requirements and Conditions - because this condition is duplicative of Condition C.19(a): General Reporting Requirements, Harsco respectfully requests that this condition be deleted.

**Response to Comment 3:**

IDEM disagrees. Condition B.15: Deviations from Permit Requirements and Conditions and Condition C.19(a): General Reporting Requirements are both included in the permit to emphasize the need for proper monitoring and recordkeeping. A single Quarterly Deviation and Compliance Monitoring Report, or its equivalent, will satisfy the requirements of both conditions.

No change has been made to the permit as a result of this comment.

**Comment 4:**

C.5: Fugitive Dust Emissions - because 326 IAC 6-4-2(4) has not been SIP-approved, Harsco respectfully requests that IDEM include a statement identifying 326 IAC 6-4.2(4) as a provision that is not federally enforceable.

**Response to Comment 4:**

IDEM disagrees. The Federally Enforceable State Operating Permit (FESOP) program is a SIP approved program. Therefore, 326 IAC 6-4-2(4) becomes federally enforceable when incorporated into a FESOP.

No change has been made to the permit as a result of this comment.

**Comment 5:**

C.13(a): Instrument Specification - Harsco respectfully requests that the phrase "for the normal range" be inserted between "maximum reading" and "shall be no less than" to clarify the scale requirements for an instrument used on a pollution control device.

**Response to Comment 5:**

IDEM agrees with the request for clarification and has revised the permit to reflect the requested change, as follows:

**C.13 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]**

---

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading **for the normal range** shall be no less than twenty percent (20%) of full scale.

...

**Comment 6:**

C.19(a): General Reporting Requirements - Harsco respectfully requests that this subcondition be revised as follows, due to the deletion of condition B.15:

The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported, **except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according the schedule stated in the applicable requirement and does not need to be included in this report.** This report shall be submitted within thirty (30) days of the end of the

reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC2- 1.1-1(1). **A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.**

#### Response to Comment 6:

On March 4, 2008, Harsco Corporation ("Harsco") withdrew the comment after several discussions whereby a consensus could not be reached. Harsco has indicated that they will not be pursuing the requested change at this time.

No change has been made to the permit as a result of this comment.

#### Comment 7:

D.1.4(a): PM10 Limitations - Harsco respectfully requests that Subcondition (a) be deleted because the fluidized bed dryer was replaced by the natural gas-fired rotary dryer (P01-14) during Significant Permit Revision No. 089-22517-00107, therefore, the application of 326 IAC 6.8-2-29 is incorrect. The rule is unit-specific and since the unit covered by the rule was removed, imposing this limitation on the current dryer is inappropriate; therefore, the inapplicability of this rule should be corrected.

Furthermore, since 326 IAC 6.8-2-29 no longer applies to the rotary dryer, it is now subject to 326 IAC 6.8-1-2(a) and the natural gas-fired rotary dryer (P01-14) should be added to section D.1.5: PM Limitations.

#### Response to Comment 7:

IDEM agrees with the request and has revised the permit to reflect the requested change, as follows:

...

##### D.1.4 PM10 Limitations [326 IAC 6.8-2]

---

Pursuant to 326 IAC 6.8-2-29 (formerly 326 IAC 6-1-10.1(d)(31)), **the PM10 emissions from the crushing and screening operations in Plant 14 shall not exceed 0.015 grain per dry standard cubic foot and 9.0 lbs/hr.**

(a) ~~The PM10 emissions from dryer P01-14 shall not exceed 0.015 grain per dry standard cubic foot (gr/dscf) and 3.5 lbs/hr.~~

(b) ~~The PM10 emissions from the dry slag processing area shall not exceed 0.015 gr/dscf and 9.0 lbs/hr.~~

##### D.1.5 PM Limitations [326 IAC 6.8-1-2]

---

Pursuant to 326 IAC 6.8-1-2(a) (formerly 326 IAC 6-1-2(a)), particulate matter (PM) emissions from the raw slag handling operation **and rotary dryer P01-14** shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

...

#### Comment 8:

D.3.12: Parametric Monitoring - Harsco respectfully requests that this condition be deleted because parametric monitoring pursuant to 40 CFR 60, Subpart UUU applies only to those units controlled by a wet scrubber, This emission unit is controlled by a baghouse and, therefore, the requirements of 40 CFR 60, Subpart UUU for a baghouse should apply.

### Response to Comment 8:

On January 11, 2008, Harsco Corporation ("Harsco") withdrew the comment as a result of several conversations, which clarified the use of the rule in the permit. Harsco has indicated that they will not be pursuing the requested change.

No change has been made to the permit as a result of this comment.

### Additional Changes to Permit

Upon further review, IDEM, OAQ has decided to make the following revisions to the draft permit. The Table of Contents has been updated as necessary.

- (1) On page 41 of 50 of the permit and Page 28 of 29 of the TSD, Section D.3.13 Record Keeping Requirements has been updated to correctly include the recordkeeping of the three six (6) minute opacity readings required in condition D.3.6, as follows:

#### D.3.13 Record Keeping Requirements

- (a) To document compliance with Conditions **D.3.6 and D.3.10**, the Permittee shall maintain a daily record of visible emissions from the stack exhaust for baghouse CE01-34 and the bucket elevators, conveyor transfer points, crusher, chutes, and screen. The Permittee shall include in each daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

...

- (2) On page 37 of 50 in permit, Section D.2.11 Parametric Monitoring the last paragraph has been revised to indicate that the instrument shall be calibrated every twelve (12) months, as correctly shown in Section D.1.12 Parametric Monitoring (Page 32 of 50) and on page 23 of 29 in the TSD, as follows:

#### D.2.11 Parametric Monitoring

...

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and GDEA, and shall be calibrated at least once every **twelve (12)** ~~six (6)~~ months.

...

- (3) The Fugitive Dust Control Plan Attachment A, Page 49 of 50, has been revised to include appropriate recordkeeping as required by 326 IAC 6-5-5 (b), as follows:

ATTACHMENT A:  
FUGITIVE DUST CONTROL PLAN  
~~Reed Minerals - Plant 14~~  
**HARSCO – Reed Minerals Division**  
7100 West 9th Avenue, **Gary, Indiana**  
**FESOP No.: 089-16215-00107**

### *Background*

Fugitive dust sources of significance from this site can be categorized into three groups: roadways, fines, stockpiles, and inactive ground level areas not dedicated to any particular use.

Total site size is 36.4 acres unpaved with 10,560 ~~yd<sup>2</sup>~~ **yd<sup>2</sup>** of unpaved roadway (.6mi. x 10 yds). This plan expects to control fugitive emissions at 92.0% reduction.

*Plan of Control*

A. Person responsible for plan implementation:

Plant Superintendent  
7100 West 9th Avenue  
Gary, Indiana  
(219) 923-4200

B. Roadway Control Measures

1. All active entrance roadways will be clearly marked and traffic will be restricted to controlled areas.
2. All vehicles shall not exceed 5 mph.
3. All active roadways will be inspected daily to assure nominal thickness (2") of **coarse** ~~course~~ aggregate oversize is maintained on all traffic areas. Required material will be placed by an on site front loader and/or dump truck.
4. Monthly representative roadway aggregate samples will be taken and analyzed to assure silt content (200 mesh) is less than 3%.

C. Fines stockpile control measures

Note: Raw material stockpiles are exempt from this plan, because silt content is .2% and moisture content is typical 5%.

1. Storage pile height shall be limited to 50 feet.
2. End loader bucket drop height will be minimized to the lowest practical elevation.
3. Water will be applied to fines stockpiles to control fugitive dust when necessary.
4. Water will not be applied to fines stockpiles when the following conditions prevail.
  - a. During freezing weather, typically between October 15 and April 15.
5. RMD completed a "green belt" alternatives study for fugitive dust control as follows:
  - a. Summer 1986 (June 1 – August 31) Select landscape consultant.
  - b. Fall 1986 (September 1 – October 31) Implement vegetative growth test areas.
  - c. Winter 1986 (November 1 – February 28) Inspect test areas, Document growth progress, Reseed winter damaged areas.
  - d. Spring 1987 (March 1 – May 30) Continue documentation of growth areas. Monitor and document progress.
  - e. Summer 1987 (June 1 – August 31) Review test program. Determine the most viable method of establishing a green belt on site. Prepare for Phase I implementation.
  - f. Fall 1987 (September 1 – October 31) Review test areas and evaluate results. Implement Phase I green belt control plan.
  - g. Spring 1988 (March 1 – April 30) Review and evaluate implementation of green

belt project. Prepare to implement Phase II construction of green belt. Repair any winter damage.

- h. Fall 1988 (May 1 – October 31) Implement Phase II green belt construction.
- i. Spring 1989 (March 1 – May 31) Review control plan and determine whether additional controls are required.

D. Open areas (Inactive)

- 1. All such classified areas will be closed to truck traffic, except by special permit.
- 2. Natural vegetative encroachment will be allowed and promoted. Green belt establishment such as this forbids the use of surface control chemicals which contaminate the existing surface and/or prevent vegetative root penetration.
- 3. All open areas with the greatest potential for reactivation as storage for fines will be covered with oversize aggregate, as set forth in the roadway control measures.

**E. Records shall be kept and maintained which document all control measures and activities to be implemented in accordance with the approved control plan. Said records shall be available upon the request of the Indiana Department of Environmental Management or the Gary Department of Environmental Affairs, and shall be retained for three (3) years.**

F E. Plan Implementation

The effective date of this plan was August 1, 1986.

Date of update: **March 04, 2008** ~~January 15, 2003~~.

...

Upon further review, IDEM, OAQ has decided to provide further clarification of information contained within the TSD:

- (a) Plant 34 only processes blast furnace and coal slag, producing roofing granules.
- (b) Section A.2 - Source Definition (Page 5 of 50 in the permit, and Page 15-16 of 29 in TSD)

Condition (a) in the Technical Support Document should actually be condition (b) and condition (b) should be condition (c) as indicated in the corresponding section of the permit.

- (c) Section A.3 Emission Units and Pollution Control Equipment Summary (Page 5-7 of 50 in the permit, and Page 16-18 of 29 in TSD)

Condition (c), in the Technical Support Document, reads "processing boiler slag from power plants and blast furnace slag" but should actually read "processing blast furnace and coal slag" as indicated in the corresponding section of the permit.

**Indiana Department of Environmental Management  
Office of Air Quality  
and Gary Department of Environmental Affairs**

**Technical Support Document (TSD) for a Significant Permit Revision to a  
Federally Enforceable State Operating Permit (FESOP)**

**Source Background and Description**

Source Name:	HARSCO - Reed Minerals Division
Source Location:	7100 West 9 <sup>th</sup> Avenue, Gary, Indiana 46406
County:	Lake
SIC Code:	3295
Operation Permit No.:	089-16215-00107
Operation Permit Issuance Date:	August 9, 2004
Significant Permit Revision No.:	089-25064-00107
Permit Reviewer:	Hannah L. Desrosiers

The Office of Air Quality (OAQ) has reviewed a revision application from Reed Minerals Division relating to the construction and operation of a stationary slag processing plant (Plant 34), a modification to the existing facilities and several administrative changes to allow for a more accurate description of the source and its facilities.

**Source Definition**

Plant 14 and Plant 24 were initially determined as one (1) source under FESOP 089-16215-00107 issued August 9, 2004.

Reed Minerals is planning on adding a stationary slag processing plant (identified as Plant 34). Since this new Plant [34] is located on the same property, has the same SIC codes, and is owned by the same company, these three (3) Plants will be considered one (1) source, effective from the date of issuance of this FESOP.

- (a) Reed Minerals – Plant 14 (Plant ID: #089-00107), a stationary slag processing plant, located at 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406 (SIC: 3295), receiving boiler slag from power plants and producing roofing granules and abrasive grit; and
- (b) Reed Minerals – Plant 24 (Plant ID: #089-05242), a portable slag processing plant, located at 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406 (SIC: 3295), processing blast furnace slag and producing roofing granules; and
- (c) Reed Minerals – Plant 34 (Plant ID: #089-00107), a stationary slag processing plant, located at 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406 (SIC: 3295), processing boiler slag from power plants and blast furnace slag, and producing roofing granules.

Only one permit will be issued under the Plant ID 089-00107.

**Existing Approvals**

The source was issued a FESOP (F089-16215-00107) on August 9, 2004. The Permittee has since received the following:

- (a) First Administrative Amendment No.: 089-20294-00107, issued on December 23, 2004;

- (b) Second Administrative Amendment No.: 089-21212-00107, issued on July 1, 2005;
- (c) First Significant Permit Revision No.: 089-22517-00107, issued on April 20, 2006; and
- (d) Third Administrative Amendment No.: 089-24577-00107, issued on July 11, 2007;

<b>County Attainment Status</b>
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The source is located in Lake County.

Pollutant	Status
PM10	Attainment
PM2.5	Nonattainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
8-hour Ozone	Moderate Nonattainment
CO	Unclassified/Attainment
Lead	Attainment

- (a) U.S.EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Lake as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Nonattainment New Source Review requirements. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.

- (1) On December 22, 2006 the United States Court of Appeals, District of Columbia issued a decision which served to partially vacate and remand the U.S. EPA's final rule for implementation of the eight-hour National Ambient Air quality Standard for ozone. *South Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882 (D.C. Cir., December 22, 2006), *rehearing denied* 2007 U.S. App. LEXIS 13748 (D.C. Cir., June 8, 2007). The U.S. EPA has instructed IDEM to issue permits in accordance with its interpretation of the *South Coast* decision as follows: Gary-Lake-Porter County was previously designated as a severe nonattainment area prior to revocation of the one-hour ozone standard, therefore, pursuant to the anti-backsliding provisions of the Clean Air Act, any new or existing source must be subject to the major source applicability cut-offs and offset ratios under the area's previous one-hour standard designation. This means that a source must achieve the Lowest Achievable Emission Rate (LAER) if it exceeds 25 tons per year of VOC emissions and must offset any increase in VOC emissions by a decrease of 1.3 times that amount.

On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NOx threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Therefore, VOC emissions were reviewed pursuant

to the requirements for nonattainment new source review. See the State Rule Applicability for the source section.

- (2) VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.
- (c) Lake County has been classified as attainment or unclassifiable in Indiana for CO, Pb, NO<sub>x</sub>, SO<sub>2</sub> and PM<sub>10</sub>. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability-Entire Source section.
- (d) Fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD or Emission Offset applicability since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980.

<b>Source Status</b>
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The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

<b>Pollutant</b>	<b>Emissions (tons/year)</b>
PM	88.5
PM <sub>10</sub>	88.5
SO <sub>2</sub>	2.8
VOC	9.2
CO	23.1
NO <sub>x</sub>	57.8

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is not a major stationary source under Emission Offset (326 IAC 2-3) because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

<b>HAPs</b>	<b>Potential To Emit (tons/year)</b>
Formaldehyde	0.01
Hexane	0.31
<b>TOTAL</b>	<b>0.32</b>

This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

- (c) These emissions are based upon FESOP Third Administrative Amendment No.: 089-24577-00107, issued on July 11, 2007.

<b>Description of New Source Construction and Proposed Revision</b>
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The Office of Air Quality (OAQ) has reviewed a Significant Permit Revision (SPR) application, submitted by Reed Minerals Division on July 26, 2007, relating to the addition of one (1) stationary slag processing plant (Plant 34) for roofing granule production; a reduction of the PM/PM10 limit for baghouse CE01-24; and several administrative changes to allow for a more accurate description of the source and its facilities.

The following is a list of the proposed emission unit(s) and pollution control device(s):

- (a) Plant 34 consisting of one (1) stationary slag processing plant for roofing granule production, approved for construction in 2007, with a maximum throughput rate of 40 tons of blast furnace and coal slag per hour, consisting of the following:
- (1) One (1) loading hopper and one (1) scalp screen operation, identified as M01-34, uncontrolled and vented to the outside;
  - (2) One (1) conveyor, identified as M02-34, to the dryer, identified as P01-34, uncontrolled and vented to the outside;
  - (3) One (1) natural gas-fired rotary dryer, identified as P01-34, and approved for construction in 2007, with a maximum heat input capacity of 22 MMBtu/hr controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (4) One (1) chute, identified as M03-34, to the bucket elevator, identified as M04-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (5) One (1) bucket elevator, identified as M04-34, to the screen, identified as P02-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (6) One (1) screen, identified as P02-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (7) One (1) conveyor, identified as M06-34, to the bucket elevator, identified as M07-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (8) One (1) bucket elevator, identified as M07-34, to the crusher, identified as P03-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (9) One (1) crusher, identified as P03-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (10) One (1) chute, identified as M08-34, to the screen, identified as P02-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;
  - (11) One (1) conveyor, identified as M05-34, controlled by baghouse CE01-34, and exhausting through stack S01-34, to two (2) bucket elevators, identified as M09-34 and M10-34;

- (12) Two (2) bucket elevators, identified as M09-34 and M10-34, to the six (6) storage tanks, controlled by the addition of granule oil and vented to the outside;
- (13) Three (3) conveyor transfer points; and
- (14) Miscellaneous insignificant activities include:
  - (A) One (1) blast furnace slag pile;
  - (B) Two (2) temporary fines piles;
  - (C) Two (2) wet screws;
  - (D) Two (2) front end loading activities to move raw materials and fines;
  - (E) One (1) load out to truck; and
  - (F) Six (6) storage silos.

The Source requests a reduction of the PM/PM10 limit for baghouse CE01-24 to allow for the new facility and retain the FESOP status, as follows:

- (a) The PM/PM10 emissions from the Baghouse CE01-24, which is used to control the portable dryer P01-24 and the conveyors, crusher, bucket elevators, and the screening operations, shall not exceed 3.08 lbs/hr. This limit is equivalent to 13.5 tons/yr of PM/PM10 emissions.

The Source also requests that the following administrative changes be made to their FESOP:

- (a) Removal of the emission limitation in condition D.1.4(a) associated with the fluidized bed dryer, that was removed in the First Significant Permit Revision, No.: 089-22517-00107, issued on April 20, 2006, as it no longer applies to the source.

**IDEM Response:**

For SPR No. 089-22517-00107, the Permittee replaced the “Fluidized Bed Dryer” with the rotary dryer in this process. IDEM believes that the rule was intended to regulate the process called “Fluidized Bed Dryer” and happened to use the name “Fluidized Bed Dryer” in the rule. Changing the process does not relieve HARSCO – Reed Minerals from complying with the Indiana SIP. The permit revision 089-22517-00107 was based on the concept that only part of the overall unit was replaced. The burner was not changed and its emissions were not counted toward the change. IDEM suggests that HARSCO – Reed minerals start a rule making to change the SIP. No change to the permit was made based on this request.

- (b) Update of existing facility identification descriptions to reflect the addition of the new facility, Plant 34, and to facilitate accurate recordkeeping.

In order to correct a typographical error, IDEM, OAQ has decided to make an additional revision to the permit as follows:

- (a) IDEM the tons per year emission limitation found in Condition D.1.3(c), PM and PM10 Limitations for the raw slag handling operations, of the permit has been corrected to coincide with the pounds per hour emission limit established in the FESOP 089-16215-00107 issued August 9, 2004.

**Unpermitted Emissions Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

**Enforcement Issue**

There are no enforcement actions pending.

**Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S01-34	Plant 34	20.0	1.67	10083.0	190.0

**Emission Calculations**

See Appendix A, pages 1 through 8, of this document for detailed emission calculations.

**Permit Level Determination – FESOP Revision**

Pursuant to 326 IAC 2-7-1(29), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-8-11.1. This table summarizes the potential to emit (PTE), reflecting all limits, of the emission units, before controls. Any control equipment is considered enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Pollutant	Potential To Emit (tons/year)
PM	927.4
PM10	920.1
SO <sub>2</sub>	0.06
VOC	9.64
CO	0.53
NO <sub>x</sub>	8.09
HAPs	0.18

**Justification for Revision**

The FESOP is being modified through a FESOP Significant Permit Revision. This revision is being performed pursuant to 326 IAC 2.8-11.1 (f)(1)(E)(i) because the PTE for the revision is greater than 25 tons per year (tpy), and pursuant to 326 IAC 2.8-11.1(g)(2) because the modification requires an adjustment to the emissions cap limitations.

**Potential to Emit of the Entire Source after Revision**

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits, of the entire source. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Values shown as ~~strike through~~ represent the PTE before revision and values shown in **bold** represent the PTE after revision.

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

Process/ Emission Unit	Potential to Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Stationary Natural Gas-Fired Rotary Dryer P01-14	15.3	15.3	0.07	0.65	9.93	11.8	<del>Negligible</del> <b>0.02</b>
Enclosed Dry Slag Processing Area	15.3	15.3	0.0	0.0	0.0	0.0	0.0
Raw Slag Handling Operation	<del>49.7</del> <b>15.3</b>	<del>49.7</del> <b>15.3</b>	0.0	0.0	0.0	0.0	0.0
Portable Natural Gas-Fired Rotary Dryer P01-24	<del>28.5</del> <b>13.5</b>	<del>28.5</del> <b>13.5</b>	0.03	0.29	4.42	5.26	0.10
Controlled Portable Slag Processing Operations			0.0	0.0	0.0	0.0	0.0
Uncontrolled Portable Slag Processing Operations	1.84	1.84	0.0	0.0	0.0	0.0	0.0
Portable Generator	2.89	2.89	2.69	3.25	8.78	40.7	<del>Negligible</del> <b>6.31</b>
Insignificant Activities	5.0	5.0	0.0	5.0	0.0	0.0	Negligible
<b>Stationary Natural Gas-Fired Rotary Dryer P01-34</b>	<b>24.1</b>	<b>24.1</b>	<b>0.06</b>	<b>0.53</b>	<b>8.09</b>	<b>9.64</b>	<b>0.20</b>
<b>Uncontrolled Slag Processing operations</b>	<b>2.0</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Total Emissions	<del>88.5</del> <b>95.2</b>	<del>88.5</del> <b>95.2</b>	<del>2.79</del> <b>2.85</b>	<del>9.19</del> <b>9.72</b>	<del>23.1</del> <b>31.2</b>	<del>57.8</del> <b>67.4</b>	<del>Negligible</del> <b>6.63</b>
PSD Threshold	250	250	250	NA	250	250	NA
Emission Offset Threshold	NA	100	NA	25	NA	NA	NA
Title V Thresholds	NA	100	100	25	100	100	10 for a single HAP and 25 for total HAPs

- (a) This revision to the existing minor stationary source is not major because the emissions increase is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) Lake County has been designated as nonattainment for PM 2.5 in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM2.5 Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM2.5 major NSR regulations, states

should assume that a major stationary source's PM10 emissions represent PM2.5 emissions. IDEM will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM2.5 NAAQS. A major source in a nonattainment area is a source that emits or has the potential to emit one hundred (100) tons per year of any nonattainment regulated pollutant. Reed Minerals has a limited potential to emit of PM10 below one hundred (100) tons per year. Therefore, assuming that PM10 emissions represent PM2.5 emissions, 326 IAC 2-1.1-5 (Nonattainment NSR) does not apply for PM2.5.

- (c) After addition of the new Plant-34 rotary dryer (P01-34) and uncontrolled slag processing operations, and revision of the PM and PM10 emission limitations for the stationary slag processing plant's (Plant-14) raw slag handling operation, and the portable slag processing plant's (Plant-24) rotary dryer (P01-24) and controlled portable slag processing operations, the potential to emit of the criteria pollutants from the entire source is still less than the PSD, Emission Offset, and Title V major source thresholds. Therefore, the requirements of 326 IAC 2-1.1-5 (Nonattainment New Source Review), 326 IAC 2-2 (PSD), and 326 IAC 2-7 (Part 70 Permit Program) are not applicable to this source.

The table below summarizes the total potential to emit of the entire source reflecting all limits, of the significant emission units after revision.

Process/ Emission Unit	Potential to Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Stationary Natural Gas-Fired Rotary Dryer P01-14	15.3	15.3	0.07	0.65	9.93	11.8	0.02
Enclosed Dry Slag Processing Area	15.3	15.3	0.0	0.0	0.0	0.0	0.0
Raw Slag Handling Operation	15.3	15.3	0.0	0.0	0.0	0.0	0.0
Portable Natural Gas-Fired Rotary Dryer P01-24	13.5	13.5	0.03	0.29	4.42	5.26	0.10
Controlled Portable Slag Processing Operations			0.0	0.0	0.0	0.0	0.0
Uncontrolled Portable Slag Processing Operations	1.84	1.84	0.0	0.0	0.0	0.0	0.0
Portable Generator	2.89	2.89	2.69	3.25	8.78	40.7	6.31
Insignificant Activities	5.0	5.0	0.0	5.0	0.0	0.0	Negligible
Stationary Natural Gas-Fired Rotary Dryer P01-34	24.1	24.1	0.06	0.53	8.09	9.64	0.20
Uncontrolled Slag Processing operations	2.0	2.0	0.0	0.0	0.0	0.0	0.0
<b>Total Emissions</b>	<b>95.2</b>	<b>95.2</b>	<b>2.85</b>	<b>9.72</b>	<b>31.2</b>	<b>67.4</b>	<b>6.63</b>
PSD Threshold	250	250	250	NA	250	250	NA
Emission Offset Threshold	NA	100	NA	25	NA	NA	NA
Title V Thresholds	NA	100	100	25	100	100	10 for a single HAP and 25 for total HAPs

### Federal Rule Applicability Determination

- (a) As initially determined in FESOP 089-16215-00107 issued August 9, 2004, this source processes coal slag and more than 50% of the slag becomes roofing granules. According to the definition in 40 CFR 60.731, this source is considered a mineral processing plant. Since the dryers at this source were constructed after April 23, 1986, they are subject to the requirements of the New Source Performance Standards for Calciners and Dryers in Mineral Industries (326 IAC 12, 40 CFR 60.730-737, Subpart UUU) and have the following requirements:
- (1) Pursuant to 40 CFR 60.732(a), the PM emissions from the dryers (P01-14, P01-24 and P01-34) at this source shall each not exceed 0.025 gr/dscf. Since dryer P01-14 is controlled by a wet scrubber CE01-14, it is not subject to the opacity limit in 40 CFR 60.732(b). Pursuant to 40 CFR 60.732(b), the opacity of the exhausts from dryers P01-24 and P01-34, which are each controlled by a baghouse, shall not exceed 10%.
  - (2) For the portable dryer P01-24, controlled by baghouse CE01-24, and dryer P01-34, controlled by baghouse CE01-34, the Permittee has elected to comply with the once per day monitoring requirements in 40 CFR 60.734(b), instead of installing a continuous opacity monitoring system as required in 40 CFR 60.734(a). Pursuant to 40 CFR 60.734(b), the Permittee shall have a certified visible emissions observer to measure and record three 6-minute averages of the opacity of visible emissions to the atmosphere each day of operation in accordance with Method 9 of appendix A of part 60.
  - (3) Pursuant to 40 CFR 60.732(b)(1), the natural gas-fired rotary dryers used in the production of roofing granules shall be subject to PM and PM10 performance testing, as outlined in Method 5.
- (b) This source only processes coal slag at this plant; therefore, the New Source Performance Standards for Coal Preparation Plants (40 CFR 60.250-254, Subpart Y) are not included in this permit.
- (c) As initially determined in FESOP 089-16215-00107 issued August 9, 2004, the requirements of the New Source Performance Standards, 40 CFR Part 60, Subpart OOO, are not included in this permit because they are not applicable to slag processing operations. The original ore is expanded and vitrified in a furnace which alters the physical and chemical makeup of the ore producing a slag by-product that does not meet the definition of a nonmetallic mineral in 40 CFR Subpart 60.671.
- (d) There are no additional New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in this revision.
- (e) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 21, 40 CFR Part 63, and 40 CFR 61) included in this revision.

### State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

#### State Rule Applicability – Entire Source

##### 326 IAC 2-2 (PSD)

The source was constructed in 1990 and is not in 1 of 28 source categories. The potential to emit of PM and PM10 is limited to less than 100 tons per year pursuant to the provisions of 326 IAC 2-8, FESOP No.: 089-16215-00107 issued August 9, 2004.

Compliance with the provisions of 326 IAC 2-8 (FESOP) also ensures minor source status under 326 IAC 2-2, PSD. The revisions at the source do not result in an increase in CO or Lead emissions. Therefore, the provisions of 326 IAC 2-2, PSD do not apply to the revision.

**326 IAC 2-3 (Emission Offset)**

- (a) This existing source is located in Lake County, which is designated as nonattainment for Ozone under the 1-hour and 8-hour standard. The potential to emit of VOC from this source is less than 25 tons per year. This revision does not result in an appreciable increase in potential VOC; therefore, the provisions of 326 IAC 2-3 (Emission Offset) do not apply.
- (b) Lake County has been designated as nonattainment for PM 2.5 in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM 2.5 Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM 2.5 major NSR regulations, states should assume that a major stationary source's PM10 emissions represent PM2.5 emissions. IDEM, OAQ will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM2.5 NAAQS. A major source in a nonattainment area is a source that emits or has the potential to emit 100 tons per year of any regulated pollutant. HARSCO - Reed Minerals Division has limited its potential PM and PM10 emissions below 100 tons per year pursuant to the provisions of 326 IAC 2-8, FESOP No.: 089-16215-00107 issued August 9, 2004. Compliance with these provisions also ensures minor source status under 326 IAC 2-3, Emission Offset.

**326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

This existing source will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

**326 IAC 2-6 (Emission Reporting)**

This source is located in Lake County and did not emit more than 25 tons/yr of NO<sub>x</sub> or SO<sub>2</sub> in 2003. In addition, a Part 70 permit is not required for this source because they elected to comply with FESOP limits to limit the PTE of the entire source to less than the Part 70 major source thresholds. Therefore, this source is not subject to 326 IAC 2-6 (Emission Reporting).

**326 IAC 2-8 (FESOP)**

Pursuant to FESOP No.: 089-16215-00107 issued August 9, 2004, and 326 IAC 2-2 (PSD), the Permittee shall continue to limit their PM and PM10 emissions as follows:

**Plant-14: Stationary Slag Processing**

- (a) The PM and PM10 emissions from the natural gas-fired rotary dryer (identified as P01-14) shall not exceed 3.5 pounds per hour. This limit is equivalent to 15.3 tons of PM and PM10 per year.
- (b) The PM and PM10 emissions from the one (1) enclosed dry slag processing area shall not exceed 3.50 pounds per hour. This limit is equivalent to 15.3 tons of PM and PM10 per year.
- (c) The PM and PM10 emissions from each of the units at the dry slag handling operation shall not exceed the limit listed in the table below:

<b>Emissions Unit</b>	<b>PM and PM10 Emission Limit (pounds per hour)</b>
Loading Hopper	1.00
Each of the Three (3) Conveyor Transfer Points	0.50
Screening Operation	2.00

This limit is equivalent to 15.3 tons of PM and PM10 per year.

**Plant-24: Portable Slag Processing**

- (a) The PM and PM10 emissions from the Baghouse CE01-24 used in conjunction with the portable dryer (identified as P01-24), conveyors, crusher, bucket elevators, and the screening operations of the portable slag processing plant shall not exceed 3.08 pounds per hour. This limit is equivalent to 13.5 tons of PM and PM10 per year.
- (b) The PM and PM10 emissions from the feed hopper and each of the uncontrolled conveyor transfer points of the portable slag processing plant shall not exceed the limit listed in the table below:

<b>Emissions Unit</b>	<b>PM and PM10 Emission Limit (pounds per hour)</b>
Feed Hopper	0.22
Each of the Two (2) Uncontrolled Conveyor Transfer Points	0.10

This limit is equivalent to 1.84 tons of PM and PM10 per year.

**Plant-34: Stationary Slag Processing**

- (a) The PM/PM10 emissions from the Baghouse CE01-34, which is used to control the portable dryer P01-34 and the conveyors, crusher, bucket elevators, and the screening operations, shall not exceed 5.50 lbs/hr. This limit is equivalent to 24.1 tons/yr of PM/PM10 emissions.
- (b) The PM/PM10 emissions from the feed hopper and each of the uncontrolled conveyor transfer points of the portable slag process plant shall not exceed the limit listed in the table below:

<b>Emissions Unit</b>	<b>PM/PM10 Emission Limit (lbs/hr)</b>
Feed Hopper and Scalp Screen (M01-34)	0.35
Uncontrolled Conveyor Transfer Points (M02-34)	0.10

This is equivalent to 2.0 tons/yr of PM/PM10 emissions.

Combined with the PM/PM10 emissions from Plant 14, Plant 24, the portable generator, and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10. Therefore, this source is a minor source under 326 IAC 2-2 (PSD) and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of twenty percent (20%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This existing source is located in Lake County. Pursuant to 326 IAC 6-5-1(a), this source is not subject to the requirements of 326 IAC 6-5. Therefore, the requirements of 326 IAC 6-5 are not applicable.

326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Emission Limitations)

This source is located in Lake County and is one of the sources listed under 326 IAC 6.8-2-1. Therefore, this source is subject to the requirements in 326 IAC 6.8-10-3. Pursuant to 326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Emission Limitations), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.

- (i) The PM<sub>10</sub> emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (k) Any facility or operation not specified in 326 IAC 6-1-11.1(d) shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, submitted on January 24, 2003.

**326 IAC 6-1-11.2 (Lake County Particulate Matter Contingency Measures)**

This source is located in Lake County and is listed under 326 IAC 6.8-2-1 (Lake County PM10 Emission Requirements), therefore, the requirements of 326 IAC 6.8-11 (formerly 326 IAC 6-1-11.2) are applicable to this source. Pursuant to 326 IAC 6.8-11 (formerly 326 IAC 6-1-11.2), upon notification from IDEM, OAQ and GDEA that the source has caused or contributed to an exceedance of the twenty-four (24) hour ambient air quality standard for PM10, the Permittee shall implement any reduction measures required by 326 IAC 6.8-11 within one hundred eighty (180) days of the initial notification.

**State Rule Applicability – Stationary Plant (Plant - 34) Dryer (P01-34)**

**326 IAC 6-3 (Particulate Emissions Limitations for Manufacturing Processes)**

Dryer P01-34 is subject to the requirements contained in 326 IAC 6.8-1-2 (Nonattainment Area Particulate Limitations). Therefore, this dryer is exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(c)(3).

**326 IAC 6.8-1-2(a)(Nonattainment Area Particulate Limitations)**

This source is located in Lake County. However, the proposed dryer P01-34 is not specifically listed under 326 IAC 6.8-2-1 (Lake County PM10 Emission Requirements). Since the potential to emit particulate from this source is greater than 100 tons/yr, dryer P01-34 is subject to 326 IAC 6.8-1-2. Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2(a)) (Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from dryer P01-34 shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

**326 IAC 7-4-1 (Lake County SO<sub>2</sub> Emission Limitations)**

The potential to emit SO<sub>2</sub> from dryer P01-34 is less than 25 tons/yr. Therefore, the requirements of 326 IAC 7-4-1 are not applicable.

**State Rule Applicability - Stationary Plant (Plant - 34) Raw Slag Handling Operation**

**326 IAC 6.8-2-1 (Lake County PM10 Emission Requirements)**

This source is one of the sources listed under 326 IAC 6.8-2-1 (Lake County PM10 Emission Requirements). However, the raw slag handling operation is not specifically listed in 326 IAC 6.8-2-1. Therefore, the raw slag handling operation is not subject to 326 IAC 6.8-2-1.

**326 IAC 6.8-1-2(a)(Nonattainment Area Particulate Limitations)**

This source is located in Lake County and the raw slag handling operation is not specifically listed under 326 IAC 6.8-2-1 (Lake County PM10 Emission Requirements). However, the potential to emit particulate from this source is greater than 100 tons/yr. Therefore, the raw slag handling operation is subject to 326 IAC 6.8-1-2. Pursuant to 326 IAC 6.8-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the raw slag handling operation shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

326 IAC 6-3 (Particulate Emissions Limitations for Manufacturing Processes)

This raw slag handling operation is subject to the requirements contained in 326 IAC 6.8-1-2 (Nonattainment Area Particulate Limitations). Therefore, this handling operation is exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(c)(3).

**Compliance Determination and Monitoring Requirements (Revision)**

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance determination requirements applicable to this revision are as follows:

- (a) The stationary dryer P01-34 is a new emission unit. In order to demonstrate compliance with the PM emission limit in 40 CFR 60, Subpart UUU for this dryer, the Permittee shall perform a PM stack test for dryer P01-34 within 60 days after achieving the maximum production, but not later than 180 days after initial startup of this unit.

The compliance monitoring requirements applicable to this revision are as follows:

- (a) The proposed dryer P01-34 (which is controlled by baghouse CE01-34) and the proposed slag handling operations (which is also controlled by baghouse CE01-34) at the stationary slag processing plant (Plant-34) has applicable compliance monitoring conditions as specified below:
  - (1) Pursuant to 326 IAC 12 and 40 CFR 60.734(b), the Permittee shall have a certified visible emissions observer to measure and record three 6-minute averages of the opacity of visible emissions to the atmosphere each day of operation in accordance with Method 9 of appendix A of part 60.
  - (2) Visible emissions notations of the stack exhaust from Baghouse CE01-34 (stack S01-34) shall be performed daily during normal daylight operations when the dryer P01-34 is not in operation. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to

Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

- (b) The Permittee shall record the pressure drop across baghouse CE01-34 used in conjunction with the stationary dryer and the stationary slag handling operations, at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range as listed in the table below or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

Baghouse ID	Pressure Drop Range (inches of water)
CE01-34	2.0 - 8.0

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and GDEA, and shall be calibrated at least once every six (6) months.

- (c) The uncontrolled slag handling operations have applicable compliance monitoring conditions as specified below:
- (1) Visible emissions notations of the hoppers, transfer points, and screen exhausts shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

These monitoring conditions are necessary because uncontrolled slag handling operations must operate properly to ensure compliance with 326 IAC 2-8 (FESOP), 326 IAC 2-2 (PSD), and 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations).

### Proposed Changes

The changes listed below have been made to the Federally Enforceable State Operating Permit, No. F089-16215-00107. Deleted language appears as ~~struck through~~ and new language appears in **bold**:

...

A.2 Source Definition [326 IAC 2-8-1] [326 IAC 2-7-1(22)]

This slag processing company consists of ~~two~~ **three (2 3)** plants at this location:

...

- (a) ~~Reed Minerals Portable Plant~~ – **Plant 24** (Plant ID: #089-05242), a portable slag processing plant, located at 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406 (SIC: 3295), processing blast furnace slag and producing roofing granules.
- (b) **Reed Minerals – Plant 34 (Plant ID: #089-00107), a stationary slag processing plant, located at 7100 West 9<sup>th</sup> Avenue, Gary, Indiana 46406 (SIC: 3295), processing boiler slag from power plants and blast furnace slag, and producing roofing granules.**

Since the ~~two~~ **three (2 3)** plants are located on the same property, have the same SIC codes, and are owned by one (1) company, they will be considered one (1) source, effective from the date of issuance of this FESOP.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This source consists of the following stationary and portable emission units and pollution control devices:

**~~Stationary slag processing plant #089-00107, consisting of the following:~~**

- (a) **Plant 14 consisting of one (1) stationary slag processing plant, consisting of the following:**
  - (a 1) One (1) natural gas-fired rotary dryer, identified as P01-14 and constructed in 2006, with a maximum heating capacity of 27 MMBtu/hr and a maximum throughput rate of 65 tons of coal slag per hour. This facility is equipped with a wet scrubber (identified as ~~#14-001 CE01-14~~) for particulate control, which exhausts through stack ~~E001 S01-14~~.
  - (b 2) One (1) enclosed dry slag processing area, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, using a baghouse (identified as ~~#14-002 CE02-14~~) for particulate control, which exhausts through stack ~~E002 S02-14~~. This area consists of the following:
    - (4i) Three (3) crushers, identified as P03-14.
    - (2ii) Thirteen (13) screens, identified as ~~P04-P02-14~~.
    - (3iii) Eight (8) bucket elevators, identified as M01-14.
    - (4iv) One (1) conveying system, identified as ~~M05 M02-14~~, consisting of eleven (11) conveyors.
    - (5v) Six (6) blend silos, identified as M03-14.
    - (6vi) Three (3) roofing silos, identified as ~~M06 M05-14~~.
    - (7vii) Eight (8) blasting silos, identified as M04-14.
  - (e3) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 75 tons of coal slag per hour, consisting of the following:
    - (4i) One (1) loading hopper.
    - (2ii) Three (3) conveyor transfer points.
    - (3iii) One (1) initial screening operation.

**~~Portable slag processing plant #089-05242, consisting of the following:~~**

- (ab) **Plant 24 consisting of** ~~One~~ (1) portable slag processing plant for roofing granule production, constructed in 2004, with a maximum throughput rate of 25 tons of slag per hour, consisting of the following:
- (1) One (1) feed hopper.
  - (2) Two (2) conveyors to the dryer, identified as ~~M001~~ **M01-24** and ~~M002~~ **M02-24**.
  - (3) One (1) natural gas-fired rotary dryer, identified as ~~P001~~ **P01-24**, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (4) One (1) conveyor to chute, identified as ~~M003~~ **M03-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (5) One (1) chute to the screen, identified as ~~M004~~ **M04-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (6) One (1) screen, identified as ~~P002~~ **P02-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (7) One (1) conveyor to the bucket elevator, identified as ~~M005~~ **M05-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (8) One (1) QC screen, identified as ~~M006~~ **P03-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (9) One (1) bucket elevator, identified as ~~P003~~ **M06-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (10) One bucket elevator, identified as ~~M007~~ **M07-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (11) Two (2) bucket elevators, identified as ~~P004~~ **M08-24** and ~~P006~~ **M09-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (12) One (1) crusher, identified as ~~P005~~ **P04-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (13) One (1) J&H Hummer screen, identified as ~~P002~~ **P05-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
- (c) **Plant 34 consisting of one (1) stationary slag processing plant for roofing granule production, approved for construction in 2007, with a maximum throughput rate of 40 tons of blast furnace and coal slag per hour, consisting of the following:**
- (1) **One (1) loading hopper and one (1) scalp screen operation, identified as M01-34, uncontrolled and vented to the outside;**
  - (2) **One (1) conveyor, identified as M02-34, to the dryer, identified as P01-34, uncontrolled and vented to the outside;**

- (3) One (1) natural gas-fired rotary dryer, identified as P01-34, with a maximum heat input capacity of 22 MMBtu/hr controlled by baghouse CE01-34, and exhausting through stack S01-34;**
- (4) One (1) chute, identified as M03-34, to the bucket elevator, identified as M04-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;**
- (5) One (1) bucket elevator, identified as M04-34, to the screen, identified as P02-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;**
- (6) One (1) screen, identified as P02-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;**
- (7) One (1) conveyor, identified as M06-34, to the bucket elevator, identified as M07-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;**
- (8) One (1) bucket elevator, identified as M07-34, to the crusher, identified as P03-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;**
- (9) One (1) crusher, identified as P03-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;**
- (10) One (1) chute, identified as M08-34, to the screen, identified as P02-34, controlled by baghouse CE01-34, and exhausting through stack S01-34;**
- (11) One (1) conveyor, identified as M05-34, controlled by baghouse CE01-34, and exhausting through stack S01-34, to two (2) bucket elevators, identified as M09-34 and M10-34;**
- (12) Two (2) bucket elevators, identified as M09-34 and M10-34, to the six (6) storage tanks, controlled by the addition of granule oil and vented to the outside; and**
- (13) The fines collected in baghouse CE01-34, and the undersized particles and fines from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture.**

**A.4 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]**

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

...

- (k) Other emission units, not regulated by a NESHAP, with PM<sub>10</sub> and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:**

- ...
- (5) One (1) blast furnace slag pile.
- (6) Two (2) temporary fines piles
- (7) Two (2) wet screws
- (8) Two (2) front end loading activities to move raw materials and fines
- (9) One (1) load out to truck
- (10) Six (6) storage silos
- ...

C.1 Overall Source Limit [326 IAC 2-8] [326 IAC 2-2][326 IAC 2-3]

- ...
- (1) The potential to emit volatile organic compounds (VOCs) from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period. This limitation ~~will~~ **shall** also ~~make~~ **satisfy** the requirements of 326 IAC 2-3 (Emission Offset) **not applicable**;
- ...
- (b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. **This limitation will also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.**
- ...

**SECTION D.1 FACILITY CONDITIONS**

**Facility Description [326 IAC 2-8-4(10)]:**

~~Stationary slag processing plant #089-00107, consisting of the following:~~

- (a) **Plant 14 consisting of one (1) stationary slag processing plant, consisting of the following:**
  - (a 1) One (1) natural gas-fired rotary dryer, identified as P01-14 and constructed in 2006, with a maximum heating capacity of 27 MMBtu/hr and a maximum throughput rate of 65 tons of coal slag per hour. This facility is equipped with a wet scrubber (identified as ~~#14-004 CE01-14~~) for particulate control, which exhausts through stack ~~E004 S01-14~~.
  - (b 2) One (1) enclosed dry slag processing area, constructed in 1990, with a maximum throughput rate of 65 tons of coal slag per hour, using a baghouse (identified as ~~#14-002 CE02-14~~) for particulate control, which exhausts through stack ~~E002 S02-14~~. This area consists of the following:
    - (4i) Three (3) crushers, identified as P03-14.
    - (2ii) Thirteen (13) screens, identified as ~~P04~~ **P02-14**.
    - (3iii) Eight (8) bucket elevators, identified as M01-14.
    - (4iv) One (1) conveying system, identified as ~~M05~~ **M02-14**, consisting of eleven (11) conveyors.

(5v) Six (6) blend silos, identified as M03-14.

(6vi) Three (3) roofing silos, identified as ~~M06~~ M05-14.

(7vii) Eight (8) blasting silos, identified as M04-14.

(e3) One (1) raw slag handling operation, constructed in 1990, with a maximum throughput rate of 75 tons of coal slag per hour, consisting of the following:

(4i) One (1) loading hopper.

(2ii) Three (3) conveyor transfer points.

(3iii) One (1) initial screening operation.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-8-4(1)]**

**D.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]**

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to dryer ~~P04~~ P01-14 except when otherwise specified in 40 CFR 60, Subpart UUU (NSPS for Calciners and Dryers in Mineral Industries).

**D.1.2 Particulate Matter Emission Limitation [326 IAC12] [40 CFR 60, Subpart UUU]**

Pursuant to 326 IAC 12 and 40 CFR 60.732(a), the PM emissions from dryer ~~P04~~ P01-14 shall not exceed 0.025 grain per dry standard cubic foot (gr/dscf).

**D.1.3 PM and PM10 Limitations [326 IAC 2-8] [326 IAC 2-2]**

Pursuant to 326 IAC 2-8 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following requirements:

(a) The PM/PM10 emissions from dryer ~~P04~~ P01-14 shall not exceed 3.50 lbs/hr. This is equivalent to 15.3 tons of PM/PM10 emissions per year.

...

(c) The PM/PM10 emissions from each of the units at the raw slag handling operation shall not exceed the limit listed in the table below:

Unit	PM/PM10 Emission Limit (lbs/hr)
Loading Hopper	1.00
Each of the Three (3) Conveyor Transfer Points	0.50
Screening Operation	2.00

This is equivalent to ~~15.3~~ 49.7 tons/yr of PM/PM10 emissions.

...

Combined with the PM/PM10 emissions from ~~the portable slag processing plant (#089-05242)~~ Plant 24, Plant 34 and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10. Therefore, this source is a minor source under 326 IAC 2-2 (PSD) and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

...

**D.1.7 Monitoring Requirements [326 IAC12] [40 CFR 60, Subpart UUU]**

Pursuant to 326 IAC 12 and 40 CFR 60.734(d), the Permittee shall install, calibrate, maintain, and operate monitoring devices that continuously measure and record the following parameters for scrubber ~~#14-001~~ **CE01-14** (which is used to control the particulate emissions from dryer ~~P01~~ **P01-14**):

...

**D.1.9 PM and PM10 Control [326 IAC 2-8-5(a)(4)]**

(a) In order to comply with Conditions D.1.2, D.1.3, and D.1.4, scrubber ~~#14-001~~ **CE01-14** controlling the PM and PM10 emissions from the dryer ~~P01~~ **P01-14**, and baghouse ~~#14-002~~ **CE02-14** controlling the PM and PM10 emissions from the dry slag processing area shall be in operation and control PM/PM10 emissions at all times that these units are in operation.

...

**D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11]**

(a) In order to document compliance with Conditions D.1.2, D.1.3, and D.1.4, within sixty (60) days after achieving the maximum production rate and no later than 180 days after the initial start-up, the Permittee shall conduct PM and PM10 performance tests for the dryer ~~P01~~ **P01-14** utilizing methods as approved by the Commissioner.

...

**D.1.12 Parametric Monitoring [40 CFR 60, Subpart UUU]**

(a) The Permittee shall monitor and record the pressure drop and the flow rate for scrubber ~~#14-001~~ **CE01-14** at the frequency specified in the table below, when the dryer ~~P01~~ **P01-14** is in operation. Unless operated under conditions for which the Response to Excursions or Exceedances specifies otherwise, the pressure drop across the scrubber and the flow rate shall be maintained with the ranges listed in the table below or determined during the latest compliant stack test:

Scrubber ID	Monitoring Frequency	Pressure Drop Range (inches of water)	Minimum Flow Rate (gallons per minute)
<del>#14-001</del> <b>CE01-14</b>	Continuous	6.0 – 10.0	225

...

(b) The Permittee shall record the pressure drop across baghouse ~~#14-002~~ **CE02-14**, used in conjunction with the dry slag processing area, at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.0 - 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and GDEA and shall be calibrated at least once every **twelve (12)** ~~six (6)~~ months.

...

**SECTION D.2**

**FACILITY CONDITIONS**

**Facility Description [326 IAC 2-8-4(10)]:**

**~~Portable slag processing plant #089-05242, consisting of the following:~~**

- (ab) **Plant 24 consisting of** One (1) portable slag processing plant for roofing granule production, constructed in 2004, with a maximum throughput rate of 25 tons of slag per hour, consisting of the following:
- (1) One (1) feed hopper.
  - (2) Two (2) conveyors to the dryer, identified as ~~M001~~ **M01-24** and ~~M002~~ **M02-24**.
  - (3) One (1) natural gas-fired rotary dryer, identified as ~~P001~~**P01-24**, with a maximum heat input capacity of 12 MMBtu/hr, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (4) One (1) conveyor to chute, identified as ~~M003~~ **M03-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (5) One (1) chute to the screen, identified as ~~M004~~ **M04-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (6) One (1) screen, identified as ~~P002~~ **P02-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (7) One (1) conveyor to the bucket elevator, identified as ~~M005~~ **M05-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (8) One (1) QC screen, identified as ~~M006~~ **P03-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (9) One (1) bucket elevator, identified as ~~P003~~ **M06-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (10) One bucket elevator, identified as ~~M007~~ **M07-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (11) Two (2) bucket elevators, identified as ~~P004~~**M08-24** and ~~P006~~ **M09-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (12) One (1) crusher, identified as ~~P005~~ **P04-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.
  - (13) One (1) J&H Hummer screen, identified as ~~P002~~ **P05-24**, controlled by baghouse ~~CE001~~ **CE01-24**, and exhausting through stack ~~S001~~ **S01-24**.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-8-4(1)]**

**D.2.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]**

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to dryer ~~P001~~ **P01-24** except when otherwise specified in 40 CFR 60, Subpart UUU (NSPS for Calciners and Dryers in Mineral Industries).

D.2.2 Particulate Matter Emission Limitation [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 12 and 40 CFR 60.732, the PM emissions from dryer ~~P004~~ **P01-24** shall not exceed the following:

- (a) 0.025 grain per dry standard cubic foot (gr/dscf); and
- (b) 10% opacity.

D.2.3 PM and PM10 Limitations [326 IAC 2-8] [326 IAC 2-2]

Pursuant to 326 IAC 2-8 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following requirements:

- (a) The PM/PM10 emissions from the Baghouse ~~GE004~~ **CE01-24**, which is used to control the portable dryer ~~P004~~ **P01-24** and the conveyors, crusher, bucket elevators, and the screening operations, shall not exceed ~~6.50~~ **3.08** lbs/hr. This limit is equivalent to ~~28.5~~ **13.5** tons/yr of PM/PM10 emissions.

...

Combined with the PM/PM10 emissions from **Plant 14, Plant 34**, the portable generator, and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10. Therefore, this source is a minor source under 326 IAC 2-2 (PSD) and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

...

D.2.6 Monitoring Requirements [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 12 and 40 CFR 60.734(b), the Permittee shall have a certified visible emissions observer to measure and record three 6-minute averages of the opacity of visible emissions from the baghouse ~~GE004~~ **CE01-24** (used for dryer ~~P004~~ **P01-24**) to the atmosphere each day of operation in accordance with Method 9 of Appendix A of Part 60.

...

D.2.8 PM and PM10 Control [326 IAC 2-8-5(a)(4)]

- (a) In order to comply with Conditions D.2.1, D.2.2, and D.2.3, baghouse ~~GE004~~ **CE01-24** shall be in operation and control emissions at all times that the portable dryer or the portable slag handling processes are in operation.

...

D.2.9 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11] [40 CFR 60, Subpart UUU]

In order to document compliance with Conditions D.2.1, D.2.2(a), and D.2.3, within 60 days after achieving the maximum production, but not later than 180 days after initial rerouting of emissions from conveyors and screening operations to baghouse ~~GE004~~ **CE01-24**, the Permittee shall conduct PM performance test utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.

...

D.2.11 Parametric Monitoring

...

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and GDEA, and shall be calibrated at least once every **twelve (12)** ~~six (6)~~ months.

...

D.2.13 Record Keeping Requirements

- (a) To document compliance with Conditions D.2.6 and D.2.10, the Permittee shall maintain a daily record of visible emissions from the stack exhaust from baghouse ~~CE001~~ **CE01-24**. The Permittee shall include in each daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

...

**SECTION D.3**

**FACILITY CONDITIONS**

**Facility Description [326 IAC 2-8-4(10)]: Plant 34**

- (c) **Plant 34 consisting of one (1) stationary slag processing plant for roofing granule production, approved for construction in 2007, with a maximum throughput rate of 40 tons of blast furnace and coal slag per hour, consisting of the following:**
- (1) **One (1) loading hopper and one (1) scalp screen operation, identified as M01-34, uncontrolled and vented to the outside;**
  - (2) **One (1) conveyor, identified as M02-34, to the dryer, identified as P01-34 , uncontrolled and vented to the outside;**
  - (3) **One (1) natural gas-fired rotary dryer, identified as P01-34, with a maximum heat input capacity of 22 MMBtu/hr controlled by baghouse CE01-34, and exhausting through stack S01-34;**
  - (4) **One (1) chute, identified as M03-34, to the bucket elevator, identified as M04-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;**
  - (5) **One (1) bucket elevator, identified as M04-34, to the screen, identified as P02-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;**
  - (6) **One (1) screen, identified as P02-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;**
  - (7) **One (1) conveyor, identified as M06-34, to the bucket elevator, identified as M07-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;**
  - (8) **One (1) bucket elevator, identified as M07-34, to the crusher, identified as P03-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;**
  - (9) **One (1) crusher, identified as P03-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;**
  - (10) **One (1) chute, identified as M08-34, to the screen, identified as P02-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34;**
  - (11) **One (1) conveyor, identified as M05-34, controlled by baghouse CE01-34 , and exhausting through stack S01-34, from the screen, identified as P02-34, to two (2) bucket elevators, identified as M09-34 and M10-34; and**
  - (12) **Two (2) bucket elevators, identified as M09-34 and M10-34, to the six (6) storage tanks, controlled by the addition of granule oil and vented to the outside.**
  - (13) **The fines collected in baghouse CE01-34, and the undersized particles and fines**

from screen P02-34 are transported to temporary fines piles using wet screws and then transferred to an existing, permanent storage pile, using a front end loader. Particulate emissions are controlled with moisture.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

#### Emission Limitations and Standards [326 IAC 2-8-4(1)]

##### D.3.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to dryer P01-34 except when otherwise specified in 40 CFR 60, Subpart UUU (NSPS for Calciners and Dryers in Mineral Industries).

##### D.3.2 Particulate Matter Emission Limitation [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant to 326 IAC 12 and 40 CFR 60.732, the PM emissions from dryer P01-34 shall not exceed the following:

- (a) 0.025 grain per dry standard cubic foot (gr/dscf); and
- (b) 10% opacity.

##### D.3.3 PM and PM10 Limitations [326 IAC 2-8] [326 IAC 2-2]

Pursuant to 326 IAC 2-8 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following requirements:

- (a) The PM/PM10 emissions from the Baghouse CE01-34, which is used to control the dryer P01-34 and the conveyors, crusher, bucket elevators, and the screening operations, shall not exceed 5.50 lbs/hr. This limit is equivalent to 24.1 tons/yr of PM/PM10 emissions.
- (b) The PM/PM10 emissions from the feed hopper and each of the uncontrolled conveyor transfer points of slag processing Plant 34 shall not exceed the limit listed in the table below:

Unit	PM/PM10 Emission Limit (lbs/hr)
Feed Hopper and Scalp Screen (M01-34)	0.35
Uncontrolled Conveyor Transfer Point, each (M02-34)	0.10

This is equivalent to 2.0 tons/yr of PM/PM10 emissions.

Combined with the PM/PM10 emissions from Plant 14, Plant 24, the portable generator, and the insignificant activities, the emissions from the entire source are limited to less than 250 tons/yr for PM and less than 100 tons/yr for PM10. Therefore, this source is a minor source under 326 IAC 2-2 (PSD) and the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

##### D.3.4 PM Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2(a)), particulate matter (PM) emissions

from the baghouse CE01-34 shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

**D.3.5 Lake County Particulate Matter Contingency Measures [326 IAC 6.8-11]**

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Pursuant to 326 IAC 6.8-11 (formerly 326 IAC 6-1-11.2), upon notification from IDEM, OAQ and GDEA that the source has caused or contributed to an exceedance of the twenty-four (24) hour ambient air quality standard for PM<sub>10</sub>, the Permittee shall implement any reduction measures required by 326 IAC 6.8-11 within one hundred eighty (180) days of the initial notification.

**D.3.6 Monitoring Requirements [326 IAC 12] [40 CFR 60, Subpart UUU]**

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Pursuant to 326 IAC 12 and 40 CFR 60.734(b), the Permittee shall have a certified visible emissions observer to measure and record three 6-minute averages of the opacity of visible emissions from the baghouse CE01-34 (used for dryer P01-34) to the atmosphere each day of operation of the dryer in accordance with Method 9 of Appendix A of Part 60.

**D.3.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

**Compliance Determination Requirements**

**D.3.8 PM and PM<sub>10</sub> Control [326 IAC 2-8-5(a)(4)]**

---

- (a) In order to comply with Conditions D.3.1, D.3.2, and D.3.3, baghouse CE01-34 shall be in operation and control emissions at all times that the facilities that exhaust through baghouse CE01-34 are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

**D.3.9 Testing Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-1.1-11]**

---

In order to document compliance with Conditions D.3.2, and D.3.3, within sixty (60) days after achieving the maximum production rate and no later than 180 days after the initial start-up, the Permittee shall conduct PM and PM<sub>10</sub> performance tests for the dryer P01-34 utilizing methods as approved by the Commissioner.

These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM<sub>10</sub> includes filterable PM<sub>10</sub> and condensable PM<sub>10</sub>.

**Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

**D.3.10 Visible Emissions Notations**

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- (a) Visible emission notations of the stack exhausts from the baghouse CE01-34 and each of the bucket elevators, conveyor transfer points, crusher, chutes, and screen shall be performed daily during normal daylight operations when the dryer P01-34 is not in operation. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

#### **D.3.11 Parametric Monitoring**

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The Permittee shall record the pressure drop across baghouse CE01-34 used in conjunction with dryer P01-34 and the bucket elevators, conveyor transfer points, crusher, chutes, and screen, at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range as listed in the table below or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

Baghouse ID	Pressure Drop Range (inches of water)
CE01-34	2.0 - 8.0

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and GDEA, and shall be calibrated at least once every six (6) months.

#### **D.3.12 Broken or Failed Bag Detection**

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- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces, or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

#### **D.3.13 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.3.10, the Permittee shall maintain a

**daily record of visible emissions from the stack exhaust for baghouse CE01-34 and the bucket elevators, conveyor transfer points, crusher, chutes, and screen. The Permittee shall include in each daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).**

- (b) To document compliance with Condition D.3.11, the Permittee shall maintain a daily record of the pressure drop during normal operation for baghouse CE01-34. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).**
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.**

**SECTION D.4 FACILITY CONDITIONS**

**Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities**

...

- (k) Other emission units, not regulated by a NESHAP, with PM10 and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:**

...

- (5) One (1) blast furnace slag pile.**
- (6) Two (2) temporary fines piles**
- (7) Two (2) wet screws**
- (8) Two (2) front end loading activities to move raw materials and fines**
- (9) One (1) load out to truck**
- (10) Six (6) storage silos**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

...

### **Conclusion and Recommendation**

The construction of this proposed modification and the operation of the entire source shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 089-25064-00107. The staff recommends to the Commissioner that the Significant Permit Revision, be approved.

Unless otherwise stated, information used in this review was derived from the application and received by the Office of Air Quality (OAQ) on July 20, 2007. Additional information was received on September 11, 2007.

Copies of the preliminary findings have been provided to the Gary Public Library.

### **IDEM Contact**

Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 61-53, IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.

### Appendix A: Emissions Calculations Entire Source Emission Unit Summary

**Company Name:** HARSCO Reed Minerals Division  
**Address City IN Zip:** 7100 West 9th Avenue,  
Gary, Indiana 46406

**Permit No.:** 089-16215-00107  
**FESOP SPR No.:** 089-25064-00107  
**Reviewer:** Hannah L. Desrosiers

**Date:** September 14, 2007

Uncontrolled Potential Emissions (tons/year)																
Category	Pollutant	Emissions Generating Activity														TOTAL
		Existing Emission Units										New Emission Units				
		Plant 14					Plant 24					Plant 34				
	Dryer (P01) NG Combustion	Processing Area	Raw Slag Handling Operation	Unpaved Roads Fugitive Emissions	Slag Storage Piles Fugitive Emissions	Portable Dryer (P001) NG Combustion	Diesel Generator	Controlled Portable Slag Handling Operations	Uncontrolled Portable Slag Handling Operations	Dryer NG Combustion (P01-34)	Controlled Slag Handling Operations	Uncontrolled Slag Handling Operations	Fugitive Dust Material Handling			
Criteria	PM	1830.84	4231.08	13.96	33.98	0.97	405.15	2.89	6.40	1.60	915.42	7.64	3.10	1.19	7454.22	
Pollutants	PM10	1830.84	4231.08	5.35	6.33	0.46	405.15	2.89	2.33	0.71	915.42	2.78	1.33	0.56	7405.24	
	SO2	0.07	0.00	0.00	0.00	0.00	0.03	2.69	0.00	0.00	0.06	0	0	0	2.85	
	NOx	11.83	0.00	0.00	0.00	0.00	5.26	40.73	0.00	0.00	9.64	0	0	0	67.45	
	VOC	0.65	0.00	0.00	0.00	0.00	0.29	3.25	0.00	0.00	0.53	0	0	0	4.72	
	CO	9.93	0.00	0.00	0.00	0.00	4.42	8.78	0.00	0.00	8.09	0	0	0	31.22	
	Hazardous Air Pollutants	Benzene	2.48E-04	0.00	0.00	0.00	0.00	1.10E-04	7.02E-03	0.00	0.00	2.02E-04	0	0	0	7.58E-03
	Dichlorobenzene	1.42E-04	0.00	0.00	0.00	0.00	6.31E-05	4.01E-03	0.00	0.00	1.16E-04	0	0	0	4.33E-03	
	Formaldehyde	8.87E-03	0.00	0.00	0.00	0.00	3.94E-03	2.51E-01	0.00	0.00	7.23E-03	0	0	0	0.27	
	Hexane	2.13E-01	0.00	0.00	0.00	0.00	9.46E-02	6.02E+00	0.00	0.00	1.73E-01	0	0	0	6.50	
	Toluene	4.02E-04	0.00	0.00	0.00	0.00	1.79E-04	1.14E-02	0.00	0.00	3.28E-04	0	0	0	0.01	
	Cadmium	1.30E-04	0.00	0.00	0.00	0.00	5.78E-05	3.68E-03	0.00	0.00	1.06E-04	0	0	0	3.97E-03	
	Chromium	1.66E-04	0.00	0.00	0.00	0.00	7.36E-05	4.68E-03	0.00	0.00	1.35E-04	0	0	0	5.05E-03	
	Lead	5.91E-05	0.00	0.00	0.00	0.00	2.63E-05	1.67E-03	0.00	0.00	4.82E-05	0	0	0	1.81E-03	
	Manganese	4.49E-05	0.00	0.00	0.00	0.00	2.00E-05	1.27E-03	0.00	0.00	3.66E-05	0	0	0	1.37E-03	
	Nickel	2.48E-04	0.00	0.00	0.00	0.00	1.10E-04	7.02E-03	0.00	0.00	2.02E-04	0	0	0	7.58E-03	
	<b>Totals</b>	<b>2.23E-01</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9.92E-02</b>	<b>6.31E+00</b>	<b>0</b>	<b>0</b>	<b>1.82E-01</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6.81</b>	
<b>Worse Case HAP</b>															<b>6.5</b>	

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)																
Category	Pollutant	Emissions Generating Activity														TOTAL
		Existing Emission Units										New Emission Units				
		Plant 14					Plant 24					Plant 34				
	Dryer (P01) NG Combustion	Processing Area	Raw Slag Handling Operation	Unpaved Roads Fugitive Emissions	Slag Storage Piles Fugitive Emissions	Portable Dryer (P001) NG Combustion	Diesel Generator	Controlled Portable Slag Handling Operations	Uncontrolled Portable Slag Handling Operations	Dryer NG Combustion (P01-34)	Controlled Slag Handling Operations	Uncontrolled Slag Handling Operations	Fugitive Dust Material Handling			
Criteria	*PM	9.15	21.16	13.96	3.40	0.97	4.05	2.89	0.19	1.60	9.15	0.08	3.10	1.19	70.90	
Pollutants	PM10	9.15	21.16	5.35	0.63	0.46	4.05	2.89	0.08	0.71	9.15	0.03	1.33	0.56	55.57	
	SO2	0.07	0.00	0.00	0.00	0.00	0.03	2.69	0.00	0.00	0.06	0	0	0	2.85	
	NOx	11.83	0.00	0.00	0.00	0.00	5.26	40.73	0.00	0.00	9.64	0	0	0	67.45	
	VOC	0.65	0.00	0.00	0.00	0.00	0.29	3.25	0.00	0.00	0.53	0	0	0	4.72	
	CO	9.93	0.00	0.00	0.00	0.00	4.42	8.78	0.00	0.00	8.09	0	0	0	31.22	
	Hazardous Air Pollutants	Benzene	2.48E-04	0.00	0.00	0.00	0.00	1.10E-04	7.02E-03	0.00	0.00	2.02E-04	0	0	0	7.58E-03
	Dichlorobenzene	1.42E-04	0.00	0.00	0.00	0.00	6.31E-05	4.01E-03	0.00	0.00	1.16E-04	0	0	0	4.33E-03	
	Formaldehyde	8.87E-03	0.00	0.00	0.00	0.00	3.94E-03	2.51E-01	0.00	0.00	7.23E-03	0	0	0	0.27	
	n-Hexane	2.13E-01	0.00	0.00	0.00	0.00	9.46E-02	6.02E+00	0.00	0.00	1.73E-01	0	0	0	6.50	
	Toluene	4.02E-04	0.00	0.00	0.00	0.00	1.79E-04	1.14E-02	0.00	0.00	3.28E-04	0	0	0	0.01	
	Cadmium	1.30E-04	0.00	0.00	0.00	0.00	5.78E-05	3.68E-03	0.00	0.00	1.06E-04	0	0	0	3.97E-03	
	Chromium	1.66E-04	0.00	0.00	0.00	0.00	7.36E-05	4.68E-03	0.00	0.00	1.35E-04	0	0	0	5.05E-03	
	Lead	5.91E-05	0.00	0.00	0.00	0.00	2.63E-05	1.67E-03	0.00	0.00	4.82E-05	0	0	0	1.81E-03	
	Manganese	4.49E-05	0.00	0.00	0.00	0.00	2.00E-05	1.27E-03	0.00	0.00	3.66E-05	0	0	0	1.37E-03	
	Nickel	2.48E-04	0.00	0.00	0.00	0.00	1.10E-04	7.02E-03	0.00	0.00	2.02E-04	0	0	0	7.58E-03	
	<b>Totals</b>	<b>2.23E-01</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9.92E-02</b>	<b>6.31E+00</b>	<b>0</b>	<b>0</b>	<b>1.82E-01</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6.81</b>	
<b>Worse Case HAP</b>															<b>6.5</b>	

Total emissions based on rated capacity at 8,760 hours/year.

\* The emissions contained in this table are based on the control efficiency of the control device(s) used by the Source. Limited PTE based on the Source's FESOP status can be found in the following "Limited PM and PM10 Emissions" table on page 2 of 8 of this Appendix.

**Appendix A: Emission Calculations  
Limited PM and PM10 Emissions**

**Company Name:** HARSCO Reed Minerals Division  
**Address:** 7100 West 9th Avenue, Gary, Indiana 46406  
**Permit No.:** 089-16215-00107  
**FESOP SPR No.** 089-25064-00107  
**Reviewer:** Hannah L. Desrosiers  
**Date:** September 14, 2007

Emission Unit	Process	Control	326 IAC 2-8 (FESOP) PM and PM10 Limit (lb/hour)	326 IAC 2-8 (FESOP) PM and PM10 Limit (tons/year)
Stationary Rotary Dryer P01-14	Stationary Slag Processing Plant	Wet Scrubber CE01-14	3.50	15.3
Enclosed Dry Slag Processing Area	Stationary Slag Processing Plant	Baghouse CE02-14	3.50	15.3
Raw Slag Handling Operation	Stationary Slag Processing Plant	Uncontrolled	3.50	15.3
Portable Rotary Dryer P01-24 Conveyors, Crusher Bucket Elevator, Screening Operations	Portable Slag Processing Plant	Baghouse CE01-24	3.08	13.5
Feed Hopper and Conveyor Transfer Points	Portable Slag Processing Plant	Uncontrolled	0.42	1.84
Stationary Rotary Dryer P01-34	Stationary Slag Processing Plant	Baghouse CE01-34	5.50	24.1
Loading Hopper and Scalp Screen (M01-34) and Conveyor Transfer Points (M02-34)	Stationary Slag Processing Plant	Uncontrolled	0.45	2.0
<b>Total Limited Emissions (tpy )</b>			<b>20.0</b>	<b>87.4</b>

**METHODOLOGY**

Limited PTE of PM/PM10 (tons/year) = Emission Limit (lb/hour) \* 8760 hours/year \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
Existing Emission Unit Summary**

**Company Name:** HARSCO Reed Minerals Division  
**Address City IN Zip:** 7100 West 9th Avenue, Gary, Indiana 46406  
**Permit No.:** 089-16215-00107  
**FESOP SPR No.:** 089-25064-00107  
**Reviewer:** Hannah L. Desrosiers  
**Date:** September 14, 2007

Category	Pollutant	Uncontrolled Potential Emissions (tons/year)									TOTAL	
		Emissions Generating Activity										
		Plant 14				Plant 24						
	Dryer (P01) NG Combustion	Processing Area	Raw Slag Handling Operation	Unpaved Roads Fugitive Emissions	Slag Storage Piles Fugitive Emissions	Portable Dryer (P001) NG Combustion	Diesel Generator	Controlled Portable Slag Handling Operations	Uncontrolled Portable Slag Handling Operations			
Criteria	PM	1830.84	4231.08	13.96	33.98	0.97	405.15	2.89	6.40	1.60	6526.87	
Pollutants	PM10	1830.84	4231.08	5.35	6.33	0.46	405.15	2.89	2.33	0.71	6485.15	
	SO2	0.07	0	0	0	0	0.03	2.69	0	0	2.80	
	NOx	11.83	0	0	0	0	5.26	40.73	0	0	57.82	
	VOC	0.65	0	0	0	0	0.29	3.25	0	0	4.19	
	CO	9.93	0	0	0	0	4.42	8.78	0	0	23.13	
		Totals	0.22	0	0	0	0	0.10	6.31	0	0	6.63
Hazardous Air Pollutants	Benzene	2.48E-04	0	0	0	0	1.10E-04	7.02E-03	0	0	0.01	
	Dichlorobenzene	1.42E-04	0	0	0	0	6.31E-05	4.01E-03	0	0	4.22E-03	
	Formaldehyde	8.87E-03	0	0	0	0	3.94E-03	2.51E-01	0	0	0.26	
	n-Hexane	2.13E-01	0	0	0	0	9.46E-02	6.02E+00	0	0	6.33	
	Toluene	4.02E-04	0	0	0	0	1.79E-04	1.14E-02	0	0	0.01	
	Cadmium	1.30E-04	0	0	0	0	5.78E-05	3.68E-03	0	0	3.87E-03	
	Chromium	1.66E-04	0	0	0	0	7.36E-05	4.68E-03	0	0	4.92E-03	
	Lead	5.91E-05	0	0	0	0	2.63E-05	1.67E-03	0	0	1.76E-03	
	Manganese	4.49E-05	0	0	0	0	2.00E-05	1.27E-03	0	0	1.34E-03	
	Nickel	2.48E-04	0	0	0	0	1.10E-04	7.02E-03	0	0	7.38E-03	
		Totals	0.22	0	0	0	0	0.10	6.31	0	0	6.63
	<b>Worse Case HAP</b>										<b>6.33</b>	

Total emissions based on rated capacity at 8,760 hours/year.

Category	Pollutant	Controlled Potential Emissions (tons/year)									TOTAL	
		Emissions Generating Activity										
		Plant 14				Plant 24						
	Dryer (P01) NG Combustion	Processing Area	Raw Slag Handling Operation	Unpaved Roads Fugitive Emissions	Slag Storage Piles Fugitive Emissions	Portable Dryer (P001)	Diesel Generator	Controlled Portable Slag Handling Operations	Uncontrolled Portable Slag Handling Operations			
Criteria	PM	9.15	21.16	13.96	3.40	0.97	4.05	2.89	0.19	1.60	57.37	
Pollutants	PM10	9.15	21.16	5.35	0.63	0.46	4.05	2.89	0.08	0.71	44.49	
	SO2	0.07	0	0	0	0	0.03	2.69	0	0	2.80	
	NOx	11.83	0	0	0	0	5.26	40.73	0	0	57.82	
	VOC	0.65	0	0	0	0	0.29	3.25	0	0	4.19	
	CO	9.93	0	0	0	0	4.42	8.78	0	0	23.13	
		Totals	0.22	0	0	0	0	0.10	6.31	0	0	6.63
Hazardous Air Pollutants	Benzene	2.48E-04	0	0	0	0	1.10E-04	7.02E-03	0	0	7.38E-03	
	Dichlorobenzene	1.42E-04	0	0	0	0	6.31E-05	4.01E-03	0	0	4.22E-03	
	Formaldehyde	8.87E-03	0	0	0	0	3.94E-03	2.51E-01	0	0	0.26	
	Hexane	2.13E-01	0	0	0	0	9.46E-02	6.02E+00	0	0	6.33	
	Toluene	4.02E-04	0	0	0	0	1.79E-04	1.14E-02	0	0	0.01	
	Cadmium	1.30E-04	0	0	0	0	5.78E-05	3.68E-03	0	0	3.87E-03	
	Chromium	1.66E-04	0	0	0	0	7.36E-05	4.68E-03	0	0	4.92E-03	
	Lead	5.91E-05	0	0	0	0	2.63E-05	1.67E-03	0	0	1.76E-03	
	Manganese	4.49E-05	0	0	0	0	2.00E-05	1.27E-03	0	0	1.34E-03	
	Nickel	2.48E-04	0	0	0	0	1.10E-04	7.02E-03	0	0	7.38E-03	
		Totals	0.22	0	0	0	0	0.10	6.31	0	0	6.63
	<b>Worse Case HAP</b>										<b>6.33</b>	

Total emissions based on rated capacity at 8,760 hours/year.

**Appendix A: Emissions Calculations  
New Emission Unit Summary**

**Company Name:** Reed Minerals Division  
**Address City IN Zip:** 7100 West 9th Avenue, Gary, Indiana 46406  
**Permit No.:** 089-16215-00107  
**FESOP SPR No.:** 089-25064-00107  
**Reviewer:** Hannah L. Desrosiers  
**Date:** September 14, 2007

Uncontrolled Potential Emissions (tons/year)						
Category	Pollutant	New Emission Units				TOTAL
		Plant 34				
		Dryer NG Combustion (P01-34)	Uncontrolled Slag Handling Operations	Controlled Slag Handling Operations	Fugitive Dust Material Handling	
Criteria Pollutants	PM	915.42	3.10	7.64	1.19	927.35
	PM10	915.42	1.33	2.78	0.56	920.09
	SO2	0.06	0	0	0	0.06
	NOx	9.64	0	0	0	9.64
	VOC	0.53	0	0	0	0.53
	CO	8.09	0	0	0	8.09
Hazardous Air Pollutants	Benzene	2.02E-04	0	0	0	2.02E-04
	Dichlorobenzene	1.16E-04	0	0	0	1.16E-04
	Formaldehyde	7.23E-03	0	0	0	7.23E-03
	Hexane	1.73E-01	0	0	0	0.17
	Toluene	3.28E-04	0	0	0	3.28E-04
	Cadmium	1.06E-04	0	0	0	1.06E-04
	Chromium	1.35E-04	0	0	0	1.35E-04
	Lead	4.82E-05	0	0	0	4.82E-05
	Manganese	3.66E-05	0	0	0	3.66E-05
	Nickel	2.02E-04	0	0	0	2.02E-04
<b>Totals</b>		<b>1.82E-01</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.18</b>
					<b>Worse Case HAP</b>	<b>0.17</b>

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)						
Category	Pollutant	New Emission Units				TOTAL
		Plant 34				
		Dryer NG Combustion (P01-34)	Uncontrolled Slag Handling Operations	Controlled Slag Handling Operations	Fugitive Dust Material Handling	
Criteria Pollutants	PM	9.15	3.10	0.08	1.19	13.52
	PM10	9.15	1.33	0.03	0.56	11.08
	SO2	0.06	0	0	0	0.06
	NOx	9.64	0	0	0	9.64
	VOC	0.53	0	0	0	0.53
	CO	8.09	0	0	0	8.09
Hazardous Air Pollutants	Benzene	2.02E-04	0	0	0	2.02E-04
	Dichlorobenzene	1.16E-04	0	0	0	1.16E-04
	Formaldehyde	7.23E-03	0	0	0	7.23E-03
	n-Hexane	1.73E-01	0	0	0	0.17
	Toluene	3.28E-04	0	0	0	3.28E-04
	Cadmium	1.06E-04	0	0	0	1.06E-04
	Chromium	1.35E-04	0	0	0	1.35E-04
	Lead	4.82E-05	0	0	0	4.82E-05
	Manganese	3.66E-05	0	0	0	3.66E-05
	Nickel	2.02E-04	0	0	0	2.02E-04
<b>Totals</b>		<b>1.82E-01</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.18</b>
					<b>Worse Case HAP</b>	<b>0.17</b>

Total emissions based on rated capacity at 8,760 hours/year.

**Appendix A: Emission Calculations  
Natural Gas-Fired Rotary Dryer (P01-34)**

**Company Name:** Reed Minerals Division  
**Address City IN Zip:** 7100 West 9th Avenue, Gary, Indiana 46406  
**Permit No.:** 089-16215-00107  
**FESOP SPR No.:** 089-25064-00107  
**Reviewer:** Hannah L. Desrosiers  
**Date:** September 14, 2007

**Heat Input Capacity**  
(MMBtu/hour)

22.0

**Potential Throughput**  
(MMSCF/year)

193

**Baghouse (CE01-34)**  
Control Efficiency

99.0% (for PM/PM10 only)

**Particulate and VOC Emissions**

Emission Factor	Pollutant					
	PM* 2.09 (lbs/hr)	PM10* 2.09 (lbs/hr)	**SO <sub>2</sub> 0.6 (lbs/MMCF)	**NO <sub>x</sub> 100 (lbs/MMCF)	**VOC 5.5 (lbs/MMCF)	**CO 84.0 (lbs/MMCF)
PTE (tons/year) Before Control	915	915	0.06	9.6	0.53	8.09
PTE (tons/year) After Control	9.15	9.15	0.06	9.6	0.53	8.09

\* PM/PM10 emission rates are from the PM stack testing results on 09/08/94. Assume all PM10 emissions are equal to PM emissions.

\*\*Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3 (AP-42 Supplement D, 3/98).

**HAPs Emissions**

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.02E-04	1.16E-04	7.23E-03	0.17	3.28E-04

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	4.82E-05	1.06E-04	1.35E-04	3.66E-05	2.02E-04

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Total HAPs = 0.182 tpy**

NOTE: The NG combustion calculations are from the original FESOP issued to the source.

**METHODOLOGY**

Potential Throughput (MMSCF/year) = Heat Input Capacity (MMBtu/hour) \* 8760 hours/year \* 1 MMSCF/1,020 MMBtu

PTE of SO<sub>2</sub>, NO<sub>x</sub>, VOC and CO (tons/yr) = Potential Throughput (MMSCF/year) \* Emission Factor (lb/MMSCF) x 1 ton/2000 lbs

PTE of PM/PM10 Before Control (tons/year) = Emission Rate (lbs/hour) \* 8760 hours/year x 1 ton/2000 lbs

PTE of PM/PM10 After Control (tons/year) = Emission Rate (lbs/hour) \* 8760 hours/year \* 1 ton/2000 lbs \* 1/ (1 - Control Efficiency %)

**Appendix A: Emission Calculations  
PM and PM10 Emissions  
From the Controlled Slag Handling Operations**

**Company Name:** HARSCO Reed Minerals Division  
**Address City IN Zip:** 7100 West 9th Avenue, Gary, Indiana 46406  
**Permit No.:** 089-16215-00107  
**FESOP SPR No.:** 089-25064-00107  
**Reviewer:** Hannah L. Desrosiers  
**Date:** September 14, 2007

Maxmium Throughput Rate:  
40 (tons/hr)

Control Equipment  
Baghouse (CE01-34)

Process	Number of Units	PM10 Emission Factor (lbs/ton)	PTE of PM10 before Control (lbs/hr/unit)	PTE of PM10 before Control (tons/yr)	PM Emission Factor (lbs/ton)	PTE of PM before Control (lbs/hr/unit)	PTE of PM before Control (tons/yr)	Control Efficiency	PTE of PM10 after Control (tons/yr)	PTE of PM after Control (tons/yr)
Crusher (P03-34)*	1	0.00054	0.02	0.09	0.0012	0.05	0.21	99%	9.46E-04	2.10E-03
Conveyor and Chute Transfer Points (M03-34, M05-34, M06-34 & M08-34)**	4	0.0011	0.04	0.77	0.0029	0.12	2.03	99%	7.71E-03	2.03E-02
Screening (P02-34)**	1	0.0087	0.35	1.52	0.025	1.00	4.38	99%	0.02	0.04
Bucket Elevator (M04-34)	1	0.0011	0.04	0.19	0.0029	0.12	0.51	99%	1.93E-03	5.08E-03
Bucket Elevator (M07-34)	1	0.0011	0.04	0.19	0.0029	0.12	0.51	99%	1.93E-03	5.08E-03
<b>Total</b>				<b>2.78</b>			<b>7.64</b>		<b>0.03</b>	<b>0.08</b>

\*PM and PM10 emission factors are from AP-42, Table 11.19.2-2 - Crushed Stone Processing Operations (8/2004). Crusher emission factor is for the tertiary crushing operation.

\*\* Emission factors are from AP-42, Chapter 11.19, Table 11.19.2-2 - Crushed Stone Processing Operations (Draft AP-42, 06/03).

**Methodology**

PTE before Control (lbs/hr/unit) = Maximum Throughput (tons/hr) x Emission Factor (lb/ton)

PTE before Control (tons/yr) = Maximum Throughput (tons/hr) x Emission Factor (lb/ton) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs

\* PM/PM10 emission rates are from the PM stack testing results on 09/08/94. Assume all PM10 emissions are equal to PM emissions.

**Appendix A: Emission Calculations  
PM and PM10 Emissions  
From the Uncontrolled Slag Handling Operations**

**Company Name:** HARSCO Reed Minerals Division  
**Address City IN Zip:** 7100 West 9th Avenue, Gary, Indiana 46406  
**Permit No.:** 089-16215-00107  
**FESOP SPR No.:** 089-25064-00107  
**Reviewer:** Hannah L. Desrosiers  
**Date:** September 14, 2007

Maximum Throughput Rate:

40 (tons/hr)

Process	Number of Units	PM10 Emission Factor (lbs/ton)	PTE of PM10 before Control (lbs/hr/unit)	PTE of PM10 before Control (tons/yr)	PM Emission Factor (lbs/ton)	PTE of PM before Control (lbs/hr/unit)	PTE of PM before Control (tons/yr)
Feed Hopper and Scalp Screen (M01-34)	1	0.0043	0.17	0.75	0.0088	0.35	1.54
Conveyor Transfer Points (M02-34)**	1	0.0011	0.04	0.19	0.0029	0.12	0.51
Bucket Elevator (M09-34)	1	0.0011	0.04	0.19	0.003	0.12	0.53
Bucket Elevator (M10-34)	1	0.0011	0.04	0.19	0.003	0.12	0.53
<b>Total</b>				<b>1.33</b>			<b>3.10</b>

\* There is no emission factor in AP-42 for slag handling process. This emission factor is the one for low silt batch drop for iron and steel mill in AP-42, Table 12.5.4 (10/86), which is the most similar loading process in AP-42.

\*\* Emission factors are from AP-42, Chapter 11.19, Table 11.19.2-2 - Crushed Stone Processing Operations (Draft AP-42, 06/03).

### Methodology

PTE before Control (lbs/hr/unit) = Maximum Throughput (tons/hr) x Emission Factor (lb/ton)

PTE before Control (tons/yr) = Maximum Throughput (tons/hr) x Emission Factor (lb/ton) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs

\* PM/PM10 emission rates are from the PM stack testing results on 09/08/94. Assume all PM10 emissions are equal to PM emissions.

## Appendix A: Emission Calculations Fugitive Emissions

**Company Name:** Harsco - Reed Minerals Division  
**Address City IN Zip:** 7100 West 9th Avenue,  
 Gary, Indiana 46406  
**Permit No.:** 089-16215-00107  
**FESOP SPR No.:** 089-25064-00107  
**Reviewer:** Hannah L. Desrosiers  
**Date:** September 14, 2007

### Batch or Continuous Drop Operations (AP-42 Section 13.2.4)

To estimate potential fugitive dust emissions from processing and handling of raw materials (batch or continuous drop operations), AP\_42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

$$E_f = k \cdot (0.0032) \cdot [(U/5)^{1.3} / (M/2)^{1.4}]$$

where:  $E_f$  = Emission Factor (lb/ton)

$k$ (PM) =	0.74	= particle size modifier (0.74 assumed for aerodynamic diameter $\leq 100\mu\text{m}$ )
$k$ (PM10) =	0.35	= particle size modifier (0.35 assumed for aerodynamic diameter $\leq 10\mu\text{m}$ )
$U$ =	10.2	= worst case annual mean wind speed (source NOAA, 2005*)
$M$ =	4	= material % moisture content of aggregate (source: AP-42 Section 11.1.1.1)
$E_f$ (PM) =	0.0023	lb PM/ton of material handled
$E_f$ (PM10) =	0.0011	lb PM10/ton of material handled

Maximum Material Handling Throughput = 350400 tons/yr

Type of activity	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)
Truck unloading of materials into storage piles	3.97E-01	1.88E-01
Front-end loader dumping of materials into loading hopper	3.97E-01	1.88E-01
Conveyor dropping material into dryer	3.97E-01	1.88E-01
<b>Total (tons/yr)</b>	<b>1.19</b>	<b>0.56</b>

### Methodology

Potential to emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000lbs)

\*Worst case annual mean wind speed (South Bend, IN) from "Comparative Climactic Data", National Climactic Data Center, NOAA, 2005

\* PM/PM10 emission rates are from the PM stack testing results on 09/08/94. Assume all PM10 emissions are equal to PM emissions.